From: Jerry Finlinson
To: Andy Chew; Matt Maragos
CC: Bill Morgan; Jon Christensen; Ken Nielson; Phil Hailes
Date: 3/2/2004 3:11 PM
Subject: *Intermounts PWR OFA CAMS VoluProbe 2SS length (AMC #50600)*

Matt,

As we discussed on the phone today we have a problem with our Overfire air ducts. There are supposed to be 120 inches wide x 71 inches high, but the manufacturing fab made a mistake and now they are actually 120 x 75. So our question is how to deal with this issue. We have already received the 71 inch 2SS probes.

If you concur, we are considering centering the probes vertically in the duct by adding a 2 inch C channel on the bottom and a 1.5 inch C channel on the top as necessary to adjust the height. This C channel would allow air flow through the support and have minimal flow disturbance. Does that seem reasonable to you. Any reason it would be necessary to get new probes? Of course, we'll need to recalulate the duct area and enter new parameters into the CAMS transmitter.

We need to review the spacing on our test ports. On your dwg W50600AB it states that test ports should be 1 1/4 inch pipe with 3 ports, This would space them out at 23.67 inches apart. But on the Traverse Test Procedure which you sent it says that they should be spaced at 8 inch centers. So how many ports would you recommend on a 75 inch tall duct and at what spacing? Since we are expecting most of the flow in the top half of the duct, we think more ports would give us a more accurate air measurement for calibration.

Would a 1.5 inch diameter test port be preferable? We plan to have test ports on only one side of the duct, since the other side is obstructed.

Thanks, Jerry

Jerry Finlinson, Engineer
Intermountain Power Service Corp
850 West Brush Wellman Rd
Delta, UT 84624
435-864-6466 fax 0776/6670
jerry-f@ipsc.com

From: "Craig Mullen" <cmullen@gslelectric.com>
To: <kenneth-n@ipsc.com>
CC: "Mike Nuttall" <mike-n@ipsc.com>
Date: 1/26/2004 3:38 PM

Kenneth:

In accordance with your request, we submit the following pricing breakdown for your review.

Material and tax: $12,898.00 includes 10% mark-up. Also includes complete bill of material for Nema 12 wireway, all wireway supports and three (3), 8" x 8" transitional pieces (fabricated by Mallory Engineering).

Labor: 239 hrs. @ an average labor rate of $35.50/hr. with a 15% mark-up. $9,758.00.

Job equipment & expense: $1,524.00

TOTAL PRICE: $24,180.00

These hourly rates and material & equipment mark-ups are in accordance with our time & material contract agreement. If you have any questions about this quote, please feel free to contact me.

Thank You,

Craig Mullen
Project Manager

ANIXTER

QUOTATION

See attached Anixter Terms and Conditions of Sale

Date: 01/22/2004
Quote #: 23582
Customer #: 621144

KEN NIELSON
INTERMOUNTAIN POWER SERVICE CO
850 W BRUSH WELLMAN RD

DELTA, UT 84624
Phone: 435-864-6437
Fax: 435-864-0737

Anixter Inc.
Corporate Headquarters
2301 Patriot Blvd.
Glenview, IL 60025

Item	Quantity	Anixter Catalog Number and Description	Unit	Unit Price	Extended Price
01	5084	2RH-1604SPOS 16-4P TYPE TC TNC XLP VW-1 IND+O/A FOIL SHD HYP JKT 90C 600V BLK/WHT/#S 1X2000 1X3142	MF	1572.16	$7,992.86
02	2000	2RH-1601TOS 16-1T TYPE TC TNC XLP VW-1 O/A FOIL SHD HYP JKT 90C 600V BLK/WHT/RED/#S	MF	480.00	$960.00
03	1000	2RH-1601POS 16-1P TYPE TC TNC XLP VW-1 O/A FOIL SHD HYP JKT 90C 600V BLK/WHT/#S	MF	409.00	$409.00
04	4000	2RH-1203 12-3C XLP/HYP STR TNC XLP HYP JKT 600V VW-1 TYPE TC K2 STOCK DUE 2/6	MF	633.69	$2,534.76
05	1538	2RH-1204 12-4C XLP/HYP STR TNC XLP HYP JKT 600V VW-1 TYPE TC K2	MF	760.00	$1,168.88

Page Total: **$13,065.50**
Quote Total: **$13,335.50**

TERMS NET 30, subject to credit approval
F.O.B. SHIP.PT., PPD/CHARGE
SHIPMENT: MATERIAL IN ANIXTER INVENTORY IS SUBJECT TO PRIOR SALE
NOTES: ORDER ACCEPTANCE BASED UPON PRIOR CREDIT APPROVAL
PRICE ON COPPER PRODUCTS BASED ON COPPER @.1.00

Please refer all inquiries to:
MARCIA CORRALES

ANIXTER- W & C -SALT LAKE
1837 S. 4130 WEST BLDG. E

SALT LAKE CITY, UT 84104

Phone: 801-973-0302
Fax: 801-973-4472

COMMENTS: QUOTE IS VALID FOR 30 DAYS FROM ABOVE DATE
ALL MATERIAL NON-RETURNABLE WITHOUT RETURN AUTHORIZATION

ANIXTER

QUOTATION

See attached Anixter Terms and Conditions of Sale

Date: 01/22/2004
Quote #: 23582
Customer #: 821144

KEN NIELSON
INTERMOUNTAIN POWER SERVICE CO
850 W BRUSH WELLMAN RD

DELTA, UT 84624
Phone: 435-864-6437
Fax: 435-864-0737

Anixter Inc.
Corporate Headquarters
2301 Patriot Blvd.
Glenview, IL 60025

Item	Quantity	Anixter Catalog Number and Description	Unit	Unit Price	Extended Price
06	600	327-221-1601-EX-B BELDEN 1101A 16-1P THERMOCOUPLE SOL EX PVC FOIL SHD PVC JKT PLTC ITC 105C 300V	MF	450.00	$270.00

Page Total: **$270.00**
Quote Total: **$13,335.50**

TERMS NET 30, subject to credit approval
F.O.B. SHIP.PT., PPD/CHARGE
SHIPMENT: MATERIAL IN ANIXTER INVENTORY IS SUBJECT TO PRIOR SALE
NOTES: ORDER ACCEPTANCE BASED UPON PRIOR CREDIT APPROVAL
PRICE ON COPPER PRODUCTS BASED ON COPPER @.1.00

Please refer all inquiries to:
MARCIA CORRALES

ANIXTER- W & C -SALT LAKE
1837 S. 4130 WEST BLDG. E

SALT LAKE CITY, UT 84104

Phone: 801-973-0302
Fax: 801-973-4472

COMMENTS: QUOTE IS VALID FOR 30 DAYS FROM ABOVE DATE
ALL MATERIAL NON-RETURNABLE WITHOUT RETURN AUTHORIZATION

ANIXTER

QUOTATION

See attached Anixter Terms and Conditions of Sale

Date: 02/25/2004
Quote #: 23834
Customer #: 821144

KEN NIELSON
INTERMOUNTAIN POWER SERVICE CO
850 W BRUSH WELLMAN RD

DELTA, UT 84624
Phone: 435-864-6437
Fax: 435-864-0737

Anixter Inc.
Corporate Headquarters
2301 Patriot Blvd.
Glenview, IL 60025

Item	Quantity	Anixter Catalog Number and Description	Unit	Unit Price	Extended Price
01	2000	B82760 BELDEN 82760 18-1P STR TNC FEP FOIL SHD FRPVC CMP Stock Reno 2 Days ARO	MF	300.00	$600.00
				Page Total:	**$600.00**
				Quote Total:	**$600.00**

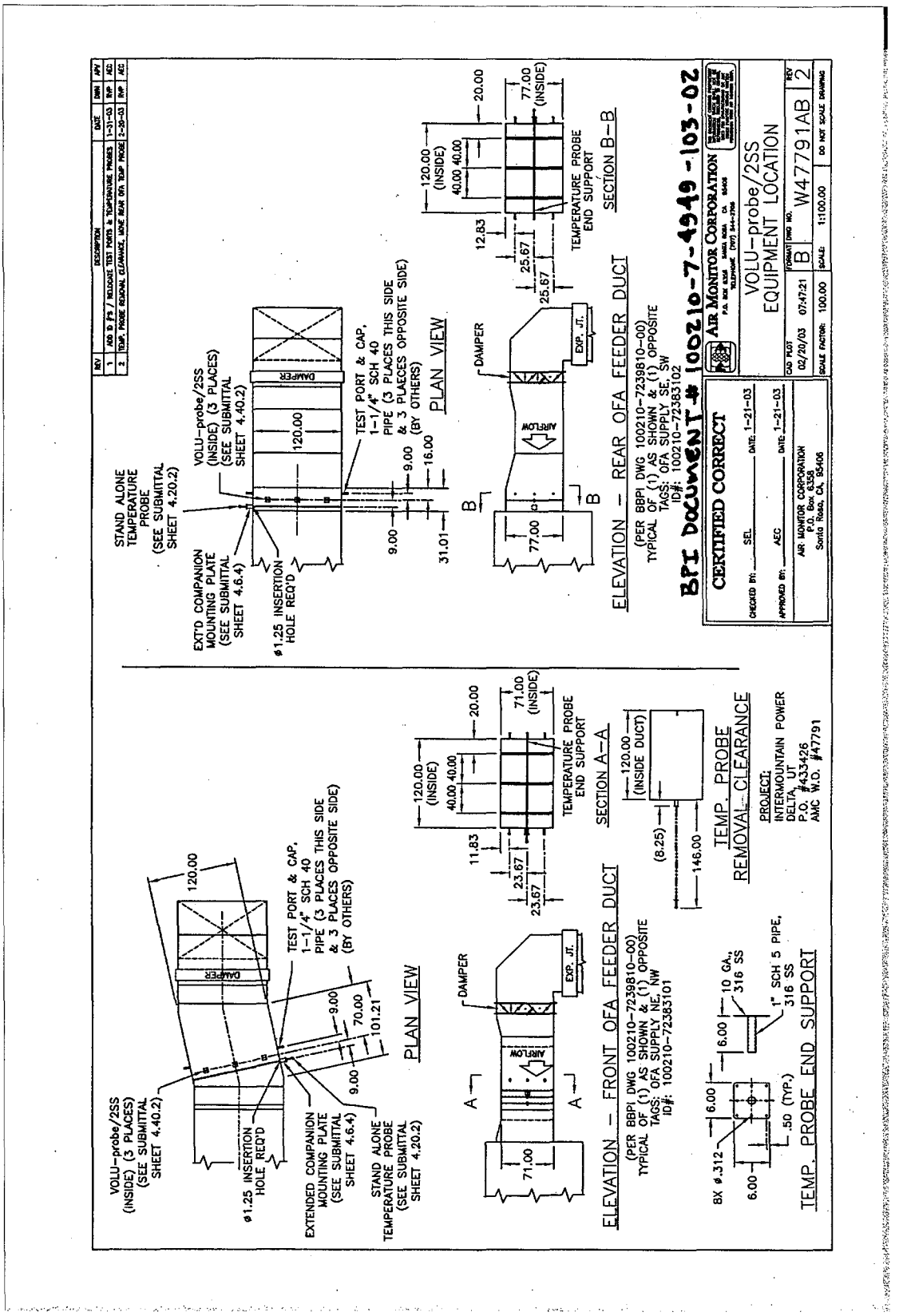
TERMS NET 30, subject to credit approval
F.O.B. SHIP.PT., PPD/CHARGE
SHIPMENT: MATERIAL IN ANIXTER INVENTORY IS SUBJECT TO PRIOR SALE
NOTES: ORDER ACCEPTANCE BASED UPON PRIOR CREDIT APPROVAL
PRICE ON COPPER PRODUCTS BASED ON COPPER @ 1.30

Please refer all inquiries to:
MARCIA CORRALES

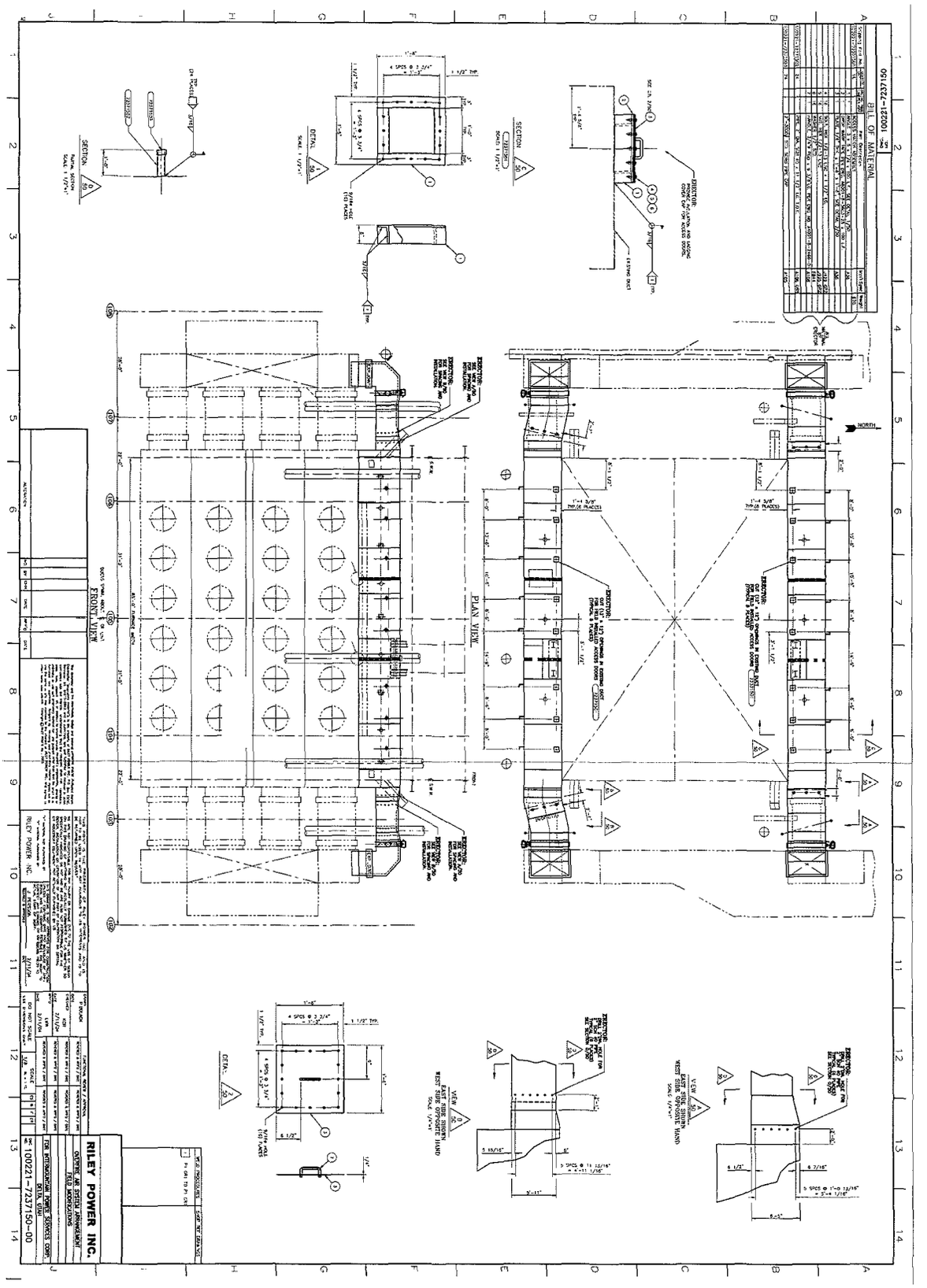
ANIXTER- W & C -SALT LAKE
1837 S. 4130 WEST BLDG. E
SALT LAKE CITY, UT 84104

Phone: 801-973-0302
Fax: 801-973-4472

COMMENTS: QUOTE IS VALID FOR 30 DAYS FROM ABOVE DATE
ALL MATERIAL NON-RETURNABLE WITHOUT RETURN AUTHORIZATION


REV
DESCRIPTION
DATE
DWN
APV
1 ADD ID #'S / RELOCATE TEST PORTS & TEMPERATURE PROBES 1-31-03 RVP AEC
2 TEMP. PROBE REGIONAL CLEARANCE, MOVE REAR OFA TEMP PROBE 2-20-03 RVP AEC
STAND ALONE TEMPERATURE PROBE (SEE SUBMITTAL SHEET 4.20.2)
VOLU-probe/2SS (INSIDE) (3 PLACES) (SEE SUBMITTAL SHEET 4.40.2)
EXT'D COMPANION MOUNTING PLATE (SEE SUBMITTAL SHEET 4.6.4)
ø1.25 INSERTION HOLE REQ'D
TEST PORT & CAP, 1-1/4" SCH 40 PIPE (3 PLACES THIS SIDE & 3 PLACES OPPOSITE SIDE) (BY OTHERS)
PLAN VIEW
DAMPER
AIRFLOW
EXP. JT.
TEMPERATURE PROBE END SUPPORT
SECTION B-B
ELEVATION - REAR OFA FEEDER DUCT
(PER BBPI DWG 100210-7239810-00) TYPICAL OF (1) AS SHOWN & (1) OPPOSITE
TAGS: OFA SUPPLY SE, SW
ID#: 100210-72383102
BPI DOCUMENT # 100210-7-4949-103-02
CERTIFIED CORRECT
CHECKED BY: SEL DATE: 1-21-03
APPROVED BY: AEC DATE: 1-21-03
AIR MONITOR CORPORATION
VOLU-probe/2SS EQUIPMENT LOCATION
CAD PLOT 02/20/03 07:47:21
FORMAT B
DWG NO. W47791AB
REV 2
SCALE FACTOR: 100.00
SCALE: 1:100.00
DO NOT SCALE DRAWING
AIR MONITOR CORPORATION P.O. Box 6306 Santa Rosa, CA. 95406
SECTION A-A
TEMP. PROBE REMOVAL CLEARANCE
PROJECT: INTERMOUNTAIN POWER DELTA, UT P.O. #433426 AMC W.O. #47791
8X ø.312
1" SCH 5 PIPE, 316 SS
10 GA., 316 SS
.50 (TYP.)
ELEVATION - FRONT OFA FEEDER DUCT
(PER BBPI DWG 100210-7239810-00) TYPICAL OF (1) AS SHOWN & (1) OPPOSITE
TAGS: OFA SUPPLY NE, NW
ID#: 100210-72383101

IP7_039910


BILL OF MATERIAL
FRONT VIEW
PLAN VIEW
RILEY POWER INC.
OXYFIRE AIR SYSTEM ARRANGEMENT
FIELD MODIFICATIONS
FOR INFORMATION POWER SERVICES CORP.
DELTA, UTAH
DWG. NO. 100221-7237150-00

From: <jgielda@babcockpower.com>
To: "Phil Hailes" <Phil-H@ipsc.com>, <jim-n@ispc.com>
CC: <kenneth-n@ipsc.com>, <SSteede@teiservices.com>, <lboucher@babcockpower....
Date: 2/12/2004 3:59 PM
Subject: 100221-IP2-Field Modification Drawing
Attachments: 100221-7237150-00.tif

Phil:

Please plot up attached drawing and give to Darrell Steete of TEI.

(See attached file: 100221-7237150-00.tif)

Regards

Jerry

1APA-PPL-008

120/280 Volt 3ø

Location - Boiler Area / Level 8 / West end of 1E Burner Group Col. H-106
Source - 1APC-MCC-1B05 / SUS 1B05
Reference - Drawing E6085 (70 Amp MCC Feed to Transformer to Panel)

Circuit	
1	RCPT, 9th Floor through 10th Floor
2	RCPT, 6th Floor through 8th Floor
3	RCPT, 9th Floor through 10th Floor
4	RCPT, 6th Floor through 8th Floor
5	Service, Primary Air Heater Duct Lighting - 5th Floor
6	RCPT, 6th Floor through 8th Floor
7	Service, Secondary Air Heater Duct Lighting - 5th Floor
8	RCPT, Northwest Boiler Camera - 9th Floor
9	1COE-IRK-0024, Instrument Enclosure (1COEE-1630-13)
10	RCPT, Southwest Boiler Camera - 9th Floor
11	1COE-IRK-0028, Instrument Enclosure (1COEE-1630-14)
12	1SGE-CAB-22, Igniter Control Cabinet (Control Power) (1SGEK-2806-01)
13	1SGE-CAB-32, Igniter Control Cabinet (Control Power) (1SGEK-2810-01)
14	1SGE-CAB-24, Igniter Control Cabinet (Control Power) (1SGEK-2808-01)
15	1SGE-CAB-34, Igniter Control Cabinet (Control Power) (1SGEK-2812-01)
16	1SGE-CAB-42, Igniter Control Cabinet (Control Power) (1SGEK-2814-01)
18	1SGE-CAB-44, Igniter Control Cabinet (Control Power) (1SGEK-2816-01)
20	1CHD-MDT-68, MDT Control 68 & 67 Probes Silo 108, High & Purge Levels (1CHDK-2324-C08)
21	1SGA-CPL-0003, Front Wall Furnace Flame West Camera Control Panel (Control Power) (1SGAK-2627-01)
22	1CHD-MDT-66, MDT Control 66 & 65 Probes Silo 107, High & Purge Levels (1CHDK-2325C-08)
23	1SGA-CPL-0005, Rear WAll Flame West Camera Control Panel (Control Power) (1SGAK-2629-01)
24	1CHD-MDT-64, MDT 63 & 64 Control Units to Probes Silo 106, High & Purge Levels (1CHDK-2326C-08)
26	1CHD-MDT-62, MDt 61 & 62 Control Units to Probes Silo 105, High & Purge Levels (1CHDK-2327C-08)

Spare Breakers

17, 19, 25, 27 thru 42

Kenneth:

In accordance with your request, we submit the following approximate cost of our 2003 Unit #1 Over Fire-Air project #293-D.

Labor: $36,000.00
GSL Supplied Material $8,000.00
ISPC provided electrical cabling
GSL Owned Equipment $3,500.00
Peterson Site Service (Sub-contractor to GSL Electric) $20,000.00

TOTAL AMOUNT: *$67,500.00*

If you have any questions, please contact me.

Thank You,

Craig Mullen

AIR MONITOR CORPORATION

TRANSMITTER SPAN/MASS FLOW CALCULATIONS

PROJECT: INTERMOUNTAIN POWER
WORK ORDER: 50600 *REV:* 1
TAG(S): OFA FEEDER DUCT (75" x 120")

Given Information:

Fluid:	AIR		% H_2O (by volume)	
Standard Temperature (T_{std}):	68	(deg. F)	0.00	(%, by volume)
Standard Barometric Pressure (P_{std}):	29.921	(in. Hg)		
Air Temperature (T):	750	(deg. F)	Maximum Flow:	
Stack/Duct Pressure (P_g):	0.00	(in. w.c.)	352,000	(lb/hr)
Actual Barometric Pressure (P_{bar}):	24.000	(in. Hg)	Wet	(Wet/Dry)
Air Density at Standard Conditions, DRY:	0.07513	(lbs/ft^3)		
Duct Shape:	RECT		Square Root Extraction? (Yes/No)	
Duct Height:	75.000	(in.)	Yes	
Duct Width:	120.000	(in.)		
			Output:	
			4-20 mADC	

Calculations:

Duct Area (A_s):	62.500	(ft^2)
Maximum Actual Velocity:	3,570	(AFPM)
Absolute Duct Pressure (P_s):	24.000	(in. Hg)
Dry Mole Fraction of Duct (Mfd):	1.000	
Dry Molecular Wt. Of Air (Md):	28.965	(lb/lb-mole)
Wet Molecular Wt. Of Air (Ms):	28.965	(lb/lb-mole)
Air Density at Standard Conditions, WET:	0.07513	(lbs/ft^3)
Air Density at Actual Conditions, WET:	0.02630	(lbs/ft^3)

K-Factor: OFF

% FLOW (%)	Diff. Press. (in. w.c.)	Output (mADC)	Actual Flow (ACFM)	Std.Flow/Dry (SCFM)	Std.Flow/Wet (SCFM)	MassFlow/Dry (Lbs/Hr)	MassFlow/Wet (Lbs/Hr)
0	0.0000	4.00	00000				
10	0.0028	5.60	22,311	7,809	7,809	35,200	35,200
20	0.0111	7.20	44,618	15,617	15,617	70,400	70,400
30	0.0250	8.80	66,929	23,426	23,426	105,600	105,600
40	0.0445	10.40	89,240	31,235	31,235	140,800	140,800
50	0.0696	12.00	111,547	39,043	39,043	176,000	176,000
60	0.1002	13.60	133,858	46,852	46,852	211,200	211,200
70	0.1363	15.20	156,169	54,661	54,661	246,400	246,400
80	0.1781	16.80	178,476	62,469	62,469	281,600	281,600
90	0.2254	18.40	200,787	70,278	70,278	316,800	316,800
100	0.2782	20.00	223,098	78,087	78,087	352,000	352,000

Transmitter:	CAMM	Power (voltage/type):	24VAC
Flow Element:	VOLU-probe/SS w/Temp Probe	Power Configuration:	4-Wire
Transmitter Maximum Range:	0 - 352,000 LB/HR	Square Root:	ON
Temperature Range:	0 to 750°F	Density Compensation:	ON
Pressure Comp. Range:	24.00 to 32.00 in. Hg		

Temperature Sensor: 3-Pt. Type "E" T/C Probe with remote 4-20mADC temperature transmitter.

Display Line #1:	0 - 352,000 LB/HR	(FLOW)
Display Line #2:	0 to 750°F	(TEMPERATURE)
Display Line #3:	24.00 to 32.00 in. Hg	(ABSOLUTE PRESSURE)
Display Line #4:	0.000 to 0.278 IN w.c.	(DIFFERENTIAL PRESSURE)

Air Monitor CAMS Setup Parameters
OVERFIRE AIR Updated 14 June 2007

U1 = Veltron IIB CPU board 4.40A 10601 800 Rev C
U2 = Veltron IIB CPU board 4.40A 10601 800 Rev D wo 50600

Serial Numbers: NE = B26913, NW = B26914, SE = B26915, SW = B26916.

1. Transmitter Scaling and Config

Process Config

Density Comp	-	ON
Density Comp Type	-	Mass
Temp/Press	-	Temp & Abs press
Process Type	-	Transmitter Flow
Process Units	-	Flow lb/hr
Process Format	-	Flow XXXX, X00 lb/hr
Process Minimum	-	Flow 00 lb/hr
Maximum	-	387,000 lbm/hr
Duct Area Units	-	Square Feet
Duct Area Range	-	0 - 325.00 sq/ft
Duct Area	-	SOUTH=59.17 sq/ft, NORTH=64.17
Temperature Units	-	°F =62.5
Barometric Pres Units	-	in. Hg
Output Lockdown	-	10.0% FS output
exit		

Temp Config

Input Linearization	-	OFF, NE = ON
Minimum Temperature	-	0°F
Maximum Temperature	-	750°F
Default Temp	-	665°F
Temp Fault Output	-	Default Temp
exit		

Absolute Pressure Config

Abs Press off/on	-	ON
Min Abs Pressure	-	24 in.Hg
Max Abs Pressure	-	32 in.Hg
exit		

Calculator for Max Flow

Calculate DP/Flow	-	Diff Press
Standard Temperature	-	68°F
Process Temperature	-	68°F
Static Pressure Units	-	in.WC
Process Static Press	-	0.0 in.WC
Bar Pres or Elevt'n	-	Barometric Pressure
Barometic Pressure	-	29.92 in.Hg - measurement
Wet/Dry Flow Basis	-	WET
Percentage Water	-	0.00%

Dry Molecular Weight - 28.966 lb/lb mole
Pitot Tube Coeffic- - 1.0
Calc Max Flow - 1,128,000 lb/hr
Calculate Diff Pres - SOUTH=0.13132 in.WC - measurement
NORTH=0.11166 in WC
Update Operating Span - NO
Reset Calc Default Values - NO
exit

Return to Main

2. Low Pass Filter Selection
   Low Pass filter - 6 - Needs more filtering as the signal is noisy and small.

3. Auto-Zero Config
   Auto-Zero Off/On Select - ON
   Auto-Zero Interval - 4HR

4. Auto-Purge Config
   Auto-Purge Off/On Select - ON
   Auto-Purge Activtn Select - INTERNAL ONLY
   Auto-Purge Interval - 23.65 hr = H

CORNER	PURGE INTERVAL
SW	8 HR
SE	8.05 HR
NE	8.15 HR
NW	8.10 HR

   Purge Duration - 1.0 Min
   After Purge Duration - 1.5 Min

5. Special Function Config
   Special Function Off/On - OFF
   Function Type - Summed Flow
   External Input Max - 00 lb/hr

6. K -Factor Config
   K-Factor Off/On - ON
   Calc K-Factor ? - NO
   Number of Data Points - One Pair
   Measured Point Selection - 1000 lb/hr
   Reference Point Selection - 1000 lb/hr
   K-Factor Gain - SW = 1.737, NE = 1.318, NW = 1.276, SE = 1.515
   K-Factor Bias - 0.0%

7. Enhanced Display Config
   - Line 1 - Filter 3
   - Line 2 - Parameter Temp
   - Line 3 - Parameter Abs Pres
   - Line 4 - Parameter Diff Press
   - Diff Pressure Units= in. Wc

8. Analog Output Config
   - Output 4 Selec - Transmitter DP

9. Transducer Span Selection -
   - Xdcr Natural Span 0.5 in.WC, sw = .3362, NE, NW = 0.319
   - Xdcr Operating Span - SOUTH=0.3753, NORTH=0.3191 in WC for 387,000 lbm/hr
   - (Calc from Mass Flow spreadsheet, set at highest temp and lowest pressure)

10. Transmitter Input Calib
    - Transducer Zero Calib - 0.00 in.WC
    - Transducer Span Calib - 0.5 in WC

11. Transmitter Ouput Calib
    - Output 1 Zero - Perform Calib
    - 1 Span - Perform Calib
    - 2 Zero - Perform Calib
    - 2 Span - Perform Calib
    - 3 Zero - Perform Calib
    - 3 Span - Perform Calib
    - 4 Zero - Perform Calib
    - 4 Span - Perform Calib

12. Xducr Characterization - depends on Xducer calib, values for U2.

	SW	SE	NE	NW

DataPoint 1 - 2721

0
0
0

Data Point 2	-	2,769	2,500	2,490	25010
Data Point 3	-	5,258	5.010	4,980	5010
Data Point 4	-	7,745	7,510	7,480	7,510
Data Point 5	-	10,238	10,050	9,990	10020

Note, these values are U1.

		Xducr Characterization						Xducr Characterization		
SW			Data 1	39		SE			Data 1	17
U1 SN	B26713		Data 2	2,512		U1 SN	B26712		Data 2	2,492
			Data 3	4,981					Data 3	4,976
			Data 4	7,441					Data 4	7,474
			Data 5	9,913					Data 5	9,990
NE			Data 1	23		NW			Data 1	23
U1 SN	B26711		Data 2	2,525		U1 SN	B26714		Data 2	2,502
			Data 3	5,040					Data 3	4,977
			Data 4	7,561					Data 4	7,488
			Data 5	10,103					Data 5	9,927

13. Display Internal Temp - 87°F - measurement
exit

From: <fpalacios@bbpwr.com>
To: <KENNETH-N@ipsc.com>
CC: <csimmons@bbpwr.com>, <ddorman@bbpwr.com>, <lboucher@bbpwr.com>
Date: 3/20/2003 1:32 PM
Subject: Air Monitor Commissioning

Ken:
We just received the following message from the Service Manager of Air Monitor. The test schedule in it is tentative and the quotation he mentions is a quote Air Monitor sent to you by mistake. We have that test in our scope at this time. This is for your information

Darrel,

Per our conversation today, my field service engineer is scheduled to be on-site at Intermountain Power on March 27th. He plans on doing the start-up of the CAMMs and then do traverse testing the following week. This
is the tentative schedule as you and I both know there may be problems bringing the unit up and traverse testing may be delayed. I have attached our original testing proposal to this message to give you an outline of the procedures and responsibilities, please let me know if you need any further information.

Regards - Bob
<<Intermountain traverse quote.PDF>>

Bob Boynton
Service Manager
Air Monitor Corporation
1-800-AIR-FLOW (1-800-247-3569) EXT.741
rboynton@airmonitor.com
http://www.airmonitor.com

From: <fpalacios@babcockpower.com>
To: <KENNETH-N@ipsc.com>
Date: 1/21/2004 12:32 PM
Subject: Air Monitor Tubing

Ken:
I was a little confused about the Swagelok "T" with a plug on the branch for your connection to compressed air. There is a T with a plug on each sensing line but its purpose is not cleaning with compressed air. The purpose is to provide a connection for our people to connect a test inclined manometer or similar to verify the Magnehelic. In that case a little piece of tubing or Swagelok port connector can be temporarily installed for the measurement with a rubber hose and inclined manometer. Provisions for cleaning will be provided by another T that has a normally closed Apollo 1/4 " valve with NPT thread on the branch to connect to your compressed air supply. Please let me know if this is OK.

From: "Gregory Stark" <GStark@Jordancontrols.com>
To: <kenneth-n@ipsc.com>
CC: <fpalacios@bbpwr.com>, "Canner Associates Inc' 'Joel Casaubon ('Joel Cas...
Date: 3/24/2003 8:31 AM
Subject: Amplifier panel assemblies and actuators

From: Greg Stark, Applications Engineer, Jordan Controls Inc

Sent: Monday, March 24, 2003

To: Intermountain Power Ken Nielson (kenneth-n@ipsc.com)

Subject: Amplifier panel assemblies and actuators

Cc: Babcock Borsig Power Francisco Palacios (fpalacios@bbpwr.com)

Canner Associates Inc' 'Joel Casaubon ('Joel Casaubon, Canner Associates Inc')

Jay Graves, Sales Manager, Jordan Controls Inc

Ken:

The amplifier panel assemblies and remaining actuators ship from Jordan Controls (Milwaukee, WI) via Fed-Ex on Friday, March 21st.

Fed-Ex tracking #'s: 7915 5831 2759 and 7915 5831 2737

Currently we show this in Salt Lake City, UT.

Please feel free to call with any questions or if you require additional assistance.

Regards, Greg Stark

Phone: 414-461-9200 ext. 260

Fax: 414-461-1024

E-mail: Gstark@jordancontrols.com

From: "Craig Mullen" <cmullen@gslelectric.com>
To: <kenneth-n@ipsc.com>
CC: "Mike Nuttall" <mike-n@ipsc.com>
Date: 1/26/2004 4:23 PM

Kenneth:

In accordance with your request, we submit the following approximate cost of our 2003 Unit #1 Over Fire-Air project #293-D.

Labor: $36,000.00
GSL Supplied Material $8,000.00
ISPC provided electrical cabling
GSL Owned Equipment $3,500.00
Peterson Site Service (Sub-contractor to GSL Electric) $20,000.00

TOTAL AMOUNT: $67,500.00

If you have any questions, please contact me.

Thank You,

Craig Mullen

From: Ken Nielson
To: Dennis Killian; James Nelson; Jerry Hintze; Joe Duwel; Jon Finlinson
Date: 4/2/2003 7:48 AM
Subject: Attempted use of OFA system on 4/2/3 night shift.

In the shift log, Operations reported that they had attempted to use the OFA system. Please note that this system has not been released for operation and had been, accordingly, disabled in the closed position. That is why it did not work.

The system will not be released for normal operation until it can be tested and the dynamic effects on boiler draft and combustion air flow can be measured as well as actual OFA air flows. Bids for this testing are in for dayshifts of 4/2, 4/3, and 4/4. Full load testing will occur today. Testing at multiple load levels is scheduled for tomorrow. Any additional full load testing will occur on Friday 4/4. Operations will be kept informed of the results of this testing.

Following each phase of testing, the testing results will be evaluated to determine any necessary modifications to the control logic prior to release of the OFA system for normal operation. This is consistent with the approved testing plan. If there are questions or concerns, please contact me.

Thanks,
Ken Nielson

From: Kevin Miller
To: Ken Nielson
CC: James Nelson
Date: 11/12/2002 2:47 PM
Subject: Boiler Power Sources
Attachments: 1APA-PPL.009; 1APA-PPL.008

Ken:

We do not have 120vac sources on the 9th floor. We do have 120vac Power Panels on the 8th floor located at the main southwest and southeast column lines H-104 and H-106. They both have plenty of spare breakers. See attached directories in WordPerfect format. There is no power on the north side. Electricians will have to run conduit from the south side to the north side for any circuits on the north side but that isn't a big deal.

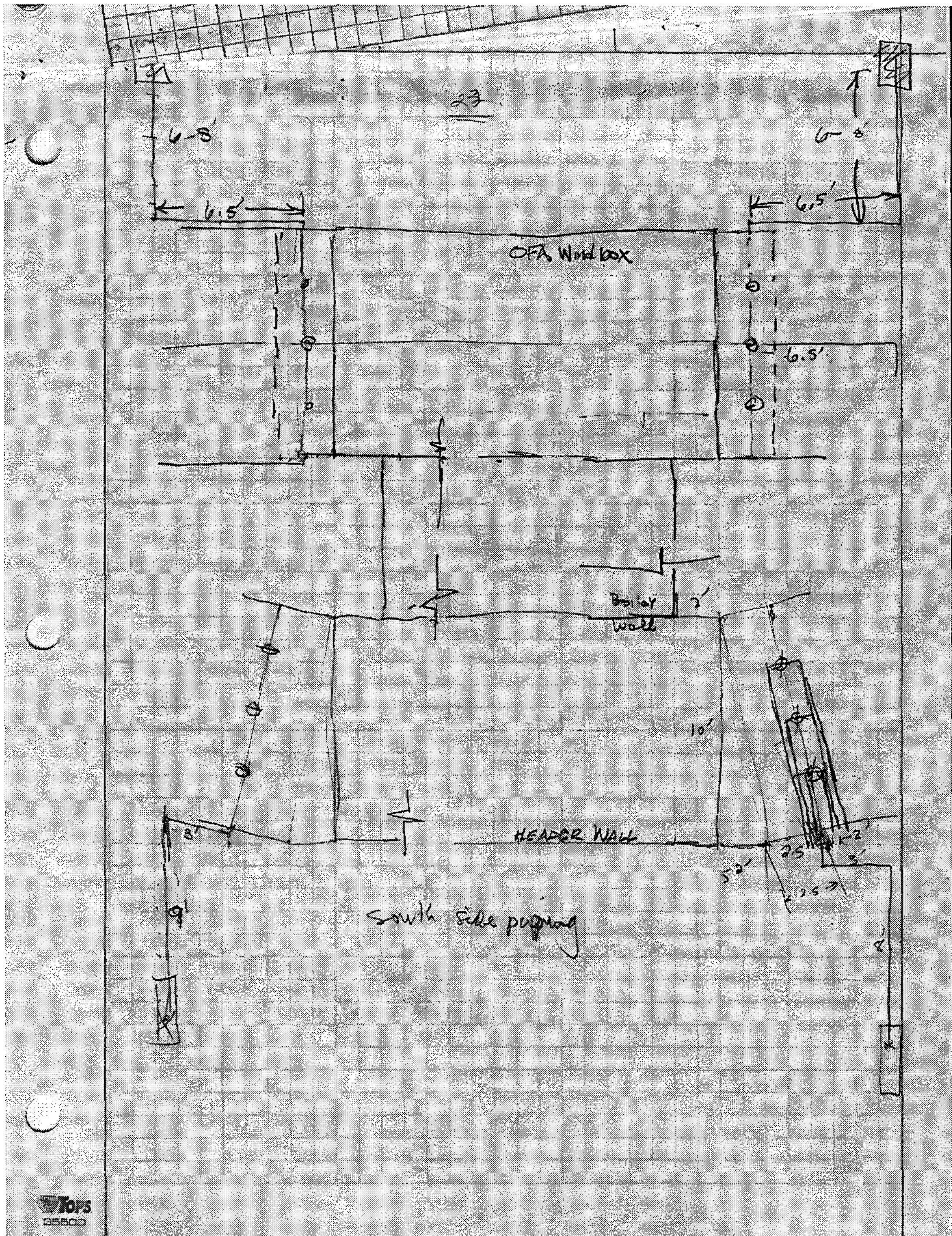
Thanks, Kevin

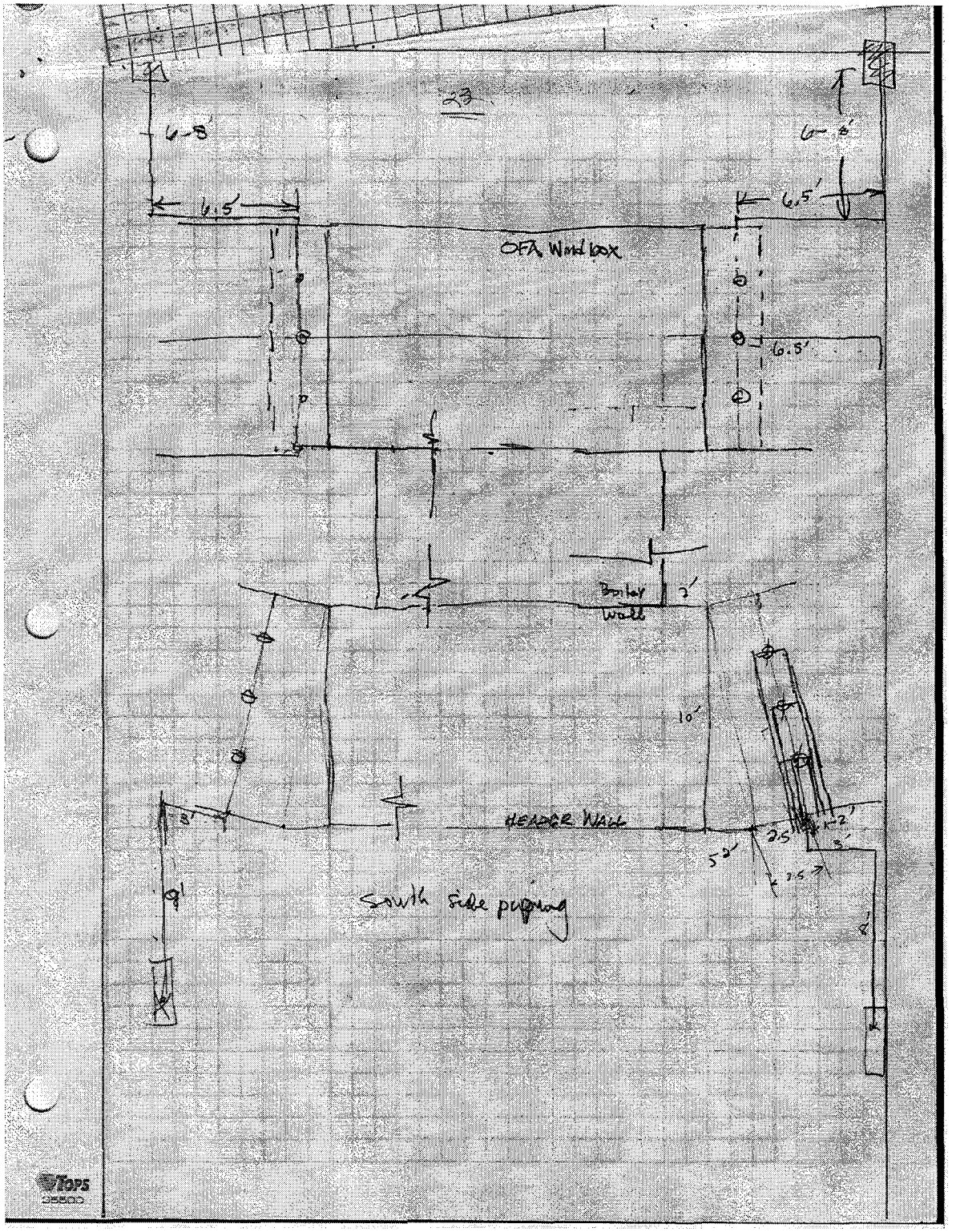
From: Jerry Finlinson
To: Ken Nielson
Date: 3/3/2003 4:51 PM
Subject: CAMS panel layout and wiring dwg 62.3401.05-10849
Attachments: 62.3401.05-10849 CAMS GENERAL ARRANGEMENT W47358AC.dwg

Ken,
It got Air Monitor to send me a drawing of the CAMS panel layout and wiring.
I have numbered it 62.3401.05-10849 in my system. You can either use my dwg which I plan to modify with the outlet and the thermocouple board inside or modify it to show how you plan to do the ground bar, etc.

Later, Jerry

Jerry Finlinson, Engineer
Intermountain Power Service Corp
850 West Brush Wellman Rd
Delta, UT 84624
435-864-6466 fax 0776/6670
jerry-f@ipsc.com


6-8'
6.5'
6-8'
6.5'
OFA Windbox
6.5'
Boiler Wall
2'
10'
3'
HEADER WALL
5'2'
2.5
2'
3'
2.5
9'
8'
South side piping


23
6-8'
6.5'
OFA Wind box
6.5'
Boiler Wall
10'
HEADER WALL
South side purge

From: Jerry Finlinson
To: Bill Morgan; James Nelson; Ken Nielson
CC: Jon Finlinson
Date: 11/18/2002 10:51 AM
Subject: Chris Simmons further details on OFA Jordan actuators

FYI,
I called Chris Simmons of Borsig, 508-854-3717 and discussed the OFA Jordan actuators.

1) There will be no isolation dampers per side, they don't typically do that.

2) The Jordan SM-5120 is for the larger 2/3 damper, the SM-1720 is for the smaller 1/3 damper.

3) He expects that they'll have the amplier built in the actuator, not remote mount. They typically do that and he doesn't think the temp will go over 150F, which is the amplifier spec. I forgot to ask if they are planning to use analog or digital amps.

4) He says the load curve is usually that below 50% load they open the 1/3 dampers, above 50% load they open the 2/3 dampers, and there is an option of opening both dampers at full load if necessary. So we can make some analog curves based on that, with manual override possible.

5) He wasn't sure about the torque loading, but presumably the Jordan actuators are sized properly. We can get those details later.

Jerry Finlinson, Engineer
Intermountain Power Service Corp
850 West Brush Wellman Rd
Delta, UT 84624
435-864-6466 fax 6670
jerry-f@ipsc.com

From: Mike Nuttall
To: cmullen@gslelectric.com
CC: Dave Spence; Jerry Finlinson; Jon Christensen; Ken Nielson; Pam Bahr
Date: 3/11/2003 9:27 AM
Subject: Conduit Markers

The conduit markers are made by Electromark. They can be reached at 800 295-8247. The rep for this area is Wanda Manasorie (sp). She is on extension 222.

Their official number is a C1003-E. These should be in a clear color. I was looking to see if they had anything that could be printed on a laser printer and covered so they would last a long time, but I haven't heard back. Let's go ahead and use these.

If you have any questions, give me a call at 435 864-6474.

From: John Fritzges
To: Finlinson, Jerry; Nielson, Ken
CC: McCann, Bruce
Date: 2/19/2004 12:25 PM
Subject: CONTROL AIR RING HEADER CLEARANCE

Ken & Jerry,
I have worked out the clearance for the Control Air Ring Header on Unit 2, 9th Floor with Bruce Mcann. Since both of you will need to be tapping into the headers on the front and back sides of the boiler for the air flow meters, Bruce asked if the work could be coordinated so we only have to isolate one time for each side. Please get together to determine when the best time would be to do this work. It looks like the third week was when we did it last year and Bruce said he would be on shift that week so he will know whats going on.
If you have any questions let me know.
Thanks

John Fritzges

From: Ron Taylor
To: Ken Nielson
Date: 4/29/2003 11:29 AM
Subject: Damper Drive Replacement....

Ken

Work order #'s 02-60456-31 & -32 have been written to replace the damper drives for the 1/3 OFA dampers. Will you please let me know when the new drives arrive? I will hold the work orders until then, and then turn them over to scheduling..... If that will be ok?

Thanks - Ron T.

From: <fpalacios@bbpwr.com>
To: <KENNETH-N@ipsc.com>
Date: 2/6/2003 2:05 PM
Subject: Drawings for BBP PO# 433413 Intermountain Power
Attachments: D038915.dwg; C027636.DWG; IM-0422.pdf; C03207903.dwg; C028662.DWG; C032073.DWG; A029188.DWG; IM-0464.PDF; IM-0607.PDF; D04208201.dwg; C04209401.dwg; C04209402.dwg; C04209403.dwg

Ken:
Here is the set of drawings that Jordan sent to me and that I referred to in my e-mail response to you.
----- Forwarded by Francisco Palacios/Riley/US on 02/06/2003 03:53 PM -----

"Gregory Stark" <GStark@Jordancontrols.com> 02/05/2003 10:18 AM

To: <fpalacios@bbpwr.com>
cc:
Subject: Drawings for BBP PO# 433413

From: Greg Stark, Applications Engineer, Jordan Controls Inc
Sent: Wednesday, February 05, 2003
To: Babcock Borsig Power Francisco Palacios (fpalacios@bbpwr.com)
Subject: Drawings for BBP PO # 433413

Francisco:

Attached please find the drawings for BBP PO # 433413.

Hard copies will be sent via UPS.

Please feel free to call with any questions or if you require additional assistance.

Regards, Greg Stark

(See attached file: D038915.dwg)(See attached file: C027636.DWG)(See attached file: IM-0422.pdf)(See attached file: C03207903.dwg)(See attached file: C028662.DWG)(See attached file: C032073.DWG)(See attached file: A029188.DWG)(See attached file: IM-0464.PDF)(See attached file: IM-0607.PDF)(See attached file: D04208201.dwg)(See attached file: C04209401.dwg)(See attached file: C04209402.dwg)(See attached file: C04209403.dwg)

This footnote also confirms that this email message has been scanned for the presence of computer viruses.
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From: Ken Nielson
To: Bernell Warner
CC: Jon Christensen
Date: 1/30/2007 5:21 PM
Subject: Drawings to be placed in master
Attachments: 1SGB-K2611_R001.dwg; 1SGB-K2609_R001.dwg; 1SGB-K2610_R001.dwg; 64.0202.05-10530_R000^D02-14 KMN.DWG; 64.0202.05-20530_R000^D02-14 KMN.DWG; 2SGB-K2609_R000^D02-14 KMN.dwg; 2SGB-K2610_R000^D02-14 KMN.dwg; 2SGB-K2611_R000^D02-14 KMN.dwg

Bernell,
Jon Christensen brought to my attention that the 1SGB & 2SGB K2000 drawings for the overfire air had not been added to the master B&V drawings folders. Please add the drawings attached below to the appropriate master folder. They are from the IGS02-14 project folder. There are some update and construction notes that will need to be removed, but they are otherwise current.

Additionally, there are some vendor drawings that need to be placed in the appropriate vendor drawings folder. These also have some construction bubbles and notes that need to be removed. The Unit 2 drawing has likely been superceded by the DCS project, phase 3. The Unit 1 drawing will be superceded by the DCS project drawings, phase 4.

Also, please since this is completed, please remove me as the master or (check-out-ee) of all of these drawings.

Let me know if questions.
Thanks,
Ken N.

ANIXTER

QUOTATION

See attached Anixter Terms and Conditions of Sale

Date: 02/11/2003
Quote #: 21079
Customer #: 821144

KEN NIELSON
INTERMOUNTAIN POWER SERVICE CO
850 W BRUSH WELLMAN RD

DELTA, UT 84624
Phone:
Fax: 438-864-0737

Anixter Inc.
Corporate Headquarters
4711 Golf Road
Skokie, IL 60076

Item	Quantity	Anixter Catalog Number and Description	Unit	Unit Price	Extended Price
01	5000	2RH-1604SPOS 16-4P TYPE TC TNC XLP VW-1 IND+O/A FOIL SHD HYP JKT 90C 600V BLK/WHT/#S	MF	1360.00	$6,800.00
02	5000	2RH-1601POS 16-1P TYPE TC TNC XLP VW-1 O/A FOIL SHD HYP JKT 90C 600V BLK/WHT/#S	MF	460.00	$2,300.00
03	5000	2RH-1203 12-3C XLP/HYP STR TNC XLP HYP JKT 600V VW-1 TYPE TC K2 ALL Stock Chicago	MF	560.00	$2,800.00
				Page Total:	**$11,900.00**
				Quote Total:	**$11,900.00**

TERMS NET 30, subject to credit approval
F.O.B. SHIP.PT., PPD/CHARGE
SHIPMENT: MATERIAL IN ANIXTER INVENTORY IS SUBJECT TO PRIOR SALE
NOTES: ORDER ACCEPTANCE BASED UPON PRIOR CREDIT APPROVAL
PRICE ON COPPER PRODUCTS BASED ON COPPER @.75LB

Please refer all inquiries to:
MARCIA CORRALES

ANIXTER- W & C -SALT LAKE
1837 S. 4130 WEST BLDG. E
SALT LAKE CITY, UT 84104

Phone: 801-973-0302
Fax: 801-973-4472

COMMENTS: QUOTE IS VALID FOR 30 DAYS FROM ABOVE DAYE
ALL MATERIAL NON-RETURNABLE WITHOUT RETURN AUTHORIZATION

ANIXTER TERMS AND CONDITIONS OF SALE

1. This proposal will become a contract upon receipt by Seller of Buyer's acceptance. Acceptance must be in writing and received by Seller within seven (7) days of the proposal date unless otherwise stated. In all events shipment by Seller and acceptance by Buyer of all or any part of the products covered by this proposal shall constitute acceptance by Buyer of this proposal. Prior to acceptance by Buyer, Seller may withdraw or modify this proposal. This agreement between Seller and Buyer ("the sales contract") with respect to the products (the "products") and/or services (the "services") described in this proposal shall consist of the terms contained herein together with any additions or revisions of such terms mutually agreed to in writing by Seller and Buyer. Seller objects to and shall not be bound by any additional or different terms, whether printed or otherwise, in any document furnished or otherwise proposed by Buyer which attempt to impose any conditions at variance with Seller's terms included herein. Seller's failure to object to provisions contained in any of Buyer's forms shall not be deemed a waiver of the provisions of Seller's terms and conditions which shall constitute the entire, final and exclusive contract between the parties. Prior courses of dealing, and verbal agreements not reduced to a writing signed by Seller, to the extent they modify, add to or detract from the sales contract, shall not be binding on Seller. The sales contract shall be for the benefit of Seller and Buyer and not for the benefit of any other person.

2. The sales contract may not be modified or rescinded except by a writing signed by Seller and Buyer. If all or part of the sales contract is terminated by such modification or rescission, Buyer, in the absence of a contrary written agreement between Seller and Buyer, shall pay termination charges based upon cost determined by accepted accounting principles, plus a reasonable profit on the entire order. Cost shall include any amount Seller must pay to its suppliers due to any termination by Seller of a purchase order for products or services intended for Buyer.

3. Unless otherwise agreed to in writing, Buyer shall pay the purchase price (a) for the products within thirty (30) days from the date of shipment of the products, and (b) for the services within thirty (30) days from the date the services are rendered. Cash discounts do not apply to cases, reels, spools or transportation charges. The purchase price for the products is F.O.B. first point of shipment unless otherwise agreed to in writing. Title to and risk of loss of the products pass to Buyer upon delivery to the carrier. Title to any software purchased shall remain with the licensor and Buyer shall be granted a license for the software according to the license agreement for such software. Buyer agrees to be bound by any license terms pertaining to software sold hereunder. In the event Buyer fails to pay the total purchase price within said thirty (30) day period, Seller shall be entitled to collect an interest charge of the lesser of 1.5% per month or the maximum rate allowed by applicable laws applied to the unpaid purchase price. Seller shall also be entitled, in addition to all other remedies available at law or in equity, to recover reasonable attorneys fees and/or other expenses in collecting the purchase price or otherwise enforcing or successfully defending itself in respect of this sales contract.

4. Any tax or other governmental charge upon the provision of services, or the production, sale, shipment, transfer, consumption, or use of the products which Seller is required to pay or collect from Buyer shall be paid by Buyer to Seller, unless Buyer furnishes Seller with exemption certificates acceptable to taxing authorities. Such amount shall be due whether or not included on the invoice.

5. *Shipping date or other applicable performance date is estimated on the basis of immediate receipt by* Seller of Buyer's order and all information, drawings and approvals to be furnished by Buyer, and the absence of delays, direct or indirect, resulting from or contributed to by circumstances beyond Seller's reasonable control. Seller will in good faith endeavor to ship products or perform services by the estimated date. Seller shall have the right to make partial shipments. All changes in specifications or estimated shipping or performance date will be by mutual written agreement of Seller and Buyer and where such changes affect Seller's time or cost of performance, an equitable adjustment in estimated shipping/performance date or purchase price, or both, will be made. Prior to shipping, Seller, if requested, will afford Buyer a reasonable opportunity to inspect the products in Seller's plant. If no packaging, loading or bracing requirements are stated, Seller will comply with minimum specifications for the method of transportation specified. If no method of transportation is specified, shipment will be by a reasonable method of transportation.

6. Buyer shall submit all claims for shortages in writing to Seller within thirty (30) days from the date products are received by Buyer; otherwise such claims shall be waived. Unless otherwise agreed to in writing, quantities are subject to normal manufacturer allowances. In the case of wire and cable such allowances are plus 10% and minus 5%. The purchase price for products will equal the unit price multiplied by the quantity shipped. Installation shall be by Buyer, unless otherwise specifically agreed to in writing. Final inspection of products prior to installation thereof will be the obligation of Buyer.

7. Seller passes on and assigns to Buyer the warranties made to Seller by its suppliers, which at a minimum, include a warranty that the products at the time of shipment to Buyer will be free from defects in materials and workmanship, and will be materially in accordance with specifications provided by the manufacturer. Seller's warranty in its entirety shall be deemed limited to and shall not extend beyond such manufacturers' warranties. The length of the warranty period will be the length established by the manufacturer of the product and if no length is specified by the manufacturer, shall in no event extend beyond one (1) year from the date of shipment. Buyer shall proceed exclusively and directly against such supplier at Seller's request. This warranty does not cover wear and tear and shall be ineffective and shall not apply to products that have been subjected to misuse or abuse, neglect, accident, damage, improper installation, or maintenance. Buyer will inspect the products upon delivery and will promptly notify Seller in writing of any defect in the products. Seller's sole obligation under these warranties will be limited to either, at Seller's option and expense, repairing or furnishing a replacement for the products or parts thereof which Seller reasonably determines do not conform with these warranties, and Buyer's exclusive remedy for breach of any such warranties will be enforcement of such obligation of Seller. All transportation costs of and in-transit risk of loss and damage to products or parts thereof returned for warranty repair, and to such repaired or replacement products or parts thereof returned to Buyer, will be borne by Buyer. No agent, employee or representative of Seller has any authority to bind Seller to any representation, affirmation or warranty concerning the products and any such representation, affirmation or warranty shall not be deemed to have become part of the basis of this sales contract and shall be unenforceable. Seller will perform the services in accordance with Seller's customary procedures. Seller makes no warranty that software will operate uninterrupted or error free. THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF, AND BUYER WAIVES ALL OTHER WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND OF ANY OTHER TYPE, WHETHER EXPRESS OR IMPLIED, ARISING BY LAW (STATUTORY OR OTHERWISE) AND WHETHER OR NOT OCCASIONED BY SELLER'S NEGLIGENCE.

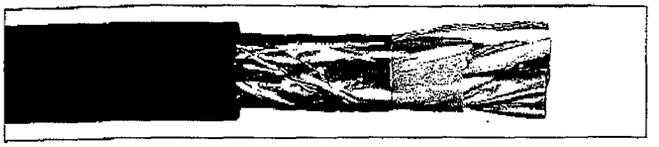
8. IN NO EVENT SHALL SELLER OR ITS SUPPLIERS BE LIABLE FOR SPECIAL, INCIDENTAL, INDIRECT, PUNITIVE, OR CONSEQUENTIAL DAMAGES, HOWEVER ARISING, INCLUDING SUCH DAMAGES OCCASIONED BY SELLER'S NEGLIGENCE, nor shall Seller's liability on any claims for damages arising out of or connected with the sales contract or the manufacture, sale, delivery or use of the products exceed the purchase price of the products and/or services. Seller shall not be liable for any failure to perform its obligations under the sales contract resulting directly or indirectly from or contributed to acts of God, acts of Buyer, civil or military authority, fires, strikes or other labor disputes, accidents, floods, war, riot, inability to secure material or transportation facilities, acts or omissions of carriers, or any other circumstances beyond Seller's reasonable control. Seller shall have no liability under this sales contract than otherwise expressly provided in this sales contract.

9. Seller will hold Buyer harmless against any rightful claim of any third person by way of infringement of any United States Letters Patent by products which are of Seller's own manufacture, but if Buyer furnishes specifications to Seller, Buyer will hold Seller harmless against any such claim which arises out of compliance with the specifications; provided that the party seeking to be held harmless notifies the other party and gives it the right to defend. Except as is provided in this paragraph, Seller makes no warranty that the products will be delivered free of the rightful claim of any third party by way of infringement of any intellectual property rights or the like. Seller's obligation under this paragraph shall not apply to any infringement consisting of the use of products as part of goods manufactured by Buyer or others.

10. This proposal and sales contract shall be governed by the Uniform Commercial Code as adopted in the State of Seller's principal place of business as effective and in force on the contract date. Wherever a term defined by said Uniform Commercial Code is used in these terms and conditions, the definition contained in the Uniform Commercial Code is to control. Any action for breach of the sales contract or any covenant or warranty must be commenced within one (1) year after the cause of action accrues.

CHTC™ Instrumentation, Shielded, XLPE/HYP

600V, UL Type TC



CATALOG NUMBER	NO. OF PAIRS/ TRIADS	COND. (AWG) SIZE	COND. STRAND	MINIMUM AVG. INSULATION THICKNESS		MINIMUM AVG. JACKET THICKNESS		NOMINAL CABLE O.D.		COPPER WEIGHT		NET WEIGHT	
				INCHES	mm	INCHES	mm	INCHES	mm	lbs/ 1000ft	kg/km	lbs/ 1000ft	kg/km
INDIVIDUAL AND OVERALL SHIELDED PAIRS/TRIADS 18 AWG CONDUCTORS													
337610	1	18	7/.0152	0.030	0.76	0.045	1.14	0.315	8.00	12.5	18.60	54	80
337620	1 TRI	18	7/.0152	0.030	0.76	0.045	1.14	0.335	8.51	17.6	26.19	64	95
337630	2	18	7/.0152	0.030	0.76	0.045	1.14	0.515	13.08	27.8	41.52	114	193
337640	4	18	7/.0152	0.030	0.76	0.060	1.52	0.640	16.26	53.3	79.32	199	296
337650	8	18	7/.0152	0.030	0.76	0.080	2.03	0.830	21.08	104.3	155.22	340	506
337660	12	18	7/.0152	0.030	0.76	0.080	2.03	1.045	26.54	155.2	230.97	528	786
337670	16	18	7/.0152	0.030	0.76	0.080	2.03	1.155	29.34	206.3	307.02	663	987
337680	20	18	7/.0152	0.030	0.76	0.080	2.03	1.280	32.51	253.7	377.56	800	1191
337690	24	18	7/.0152	0.030	0.76	0.080	2.03	1.385	35.18	308.3	458.81	941	1400
337700	36	18	7/.0152	0.030	0.76	0.110	2.79	1.630	41.40	461.3	686.51	1429	2127
337710	50	18	7/.0152	0.030	0.76	0.110	2.79	1.915	48.64	640.0	952.45	1901	2829
INDIVIDUAL AND OVERALL SHIELDED PAIRS/TRIADS 16 AWG CONDUCTORS													
240900	1	16	7/.0192	0.030	0.76	0.045	1.14	0.340	8.64	19.9	29.62	68	101
241510	1 TRI	16	7/.0192	0.030	0.76	0.045	1.14	0.355	9.02	28.0	41.67	130	193
241010	2	16	7/.0192	0.030	0.76	0.060	1.52	0.595	15.11	45.8	68.16	140	208
232560	4	16	7/.0192	0.030	0.76	0.060	1.52	0.695	17.65	83.6	124.41	216	321
241000	8	16	7/.0192	0.030	0.76	0.080	2.03	0.900	22.96	163.3	242.99	380	566
252370	12	16	7/.0192	0.030	0.76	0.080	2.03	1.135	28.83	243.8	362.75	577	859
337720	16	16	7/.0192	0.030	0.76	0.080	2.03	1.260	32.00	304.2	452.71	728	1083
337730	20	16	7/.0192	0.030	0.76	0.080	2.03	1.395	35.43	380.0	565.81	881	1311
337740	24	16	7/.0192	0.030	0.76	0.080	2.03	1.510	38.35	455.1	677.28	1039	1546
337750	36	16	7/.0192	0.030	0.76	0.110	2.79	1.845	46.86	681.6	1014.36	1576	2345
337760	50	16	7/.0192	0.030	0.76	0.110	2.79	2.095	53.21	945.8	1407.54	2105	3133

Dimensions and weights are nominal; subject to industry tolerance.

Product Construction

Conductor:
- 18 AWG and 16 AWG tinned, annealed copper per ASTM B33
- Class B stranding per ASTM B8

Insulation:
- Flame-retardant Cross-Linked Polyethylene (XLPE)
- Color coded: per ICEA Method 1; Pairs - black and white. Triads - black, white and red. One conductor in each pair or triad is printed alpha-numerically for easy identification

Shield:
Individual and overall shielded pairs/triads
- Individual pairs/triads are 100% shielded with Flexfoil® aluminum/polyester in contact with stranded tinned copper drain wire
- Overall shield is Flexfoil® aluminum/polyester in contact with stranded tinned copper drain wire.

Jacket:
- Low-Lead Hypalon® Chlorosulfonated Polyethylene (CSPE)

Print:
- GENERAL CABLE® BICC® BRAND (WC) CHTC XX/SPS/STS XXAWG SHIELDED XLP/HYP SHIELDED (UL) TYPE TC 600V 90°C DRY 90°C WET SUN RES OIL RES I & II MONTH/YEAR OF MFG SEQUENTIAL FOOTAGE MARK

Options:
- Bare copper conductor
- Class C stranding
- Ethylene Propylene Rubber (EPR) insulation
- Thermoplastic Low-Smoke, Zero-Halogen (LSZH) jacket
- Thermoset Low-Smoke, Zero-Halogen (XL-LSZH) jacket
- Other constructions available upon request

Applications:
- In free air, raceways, or direct burial in accordance with NEC
- In wet or dry locations
- Permitted for use in Class I Division 2 industrial hazardous locations per NEC Article 501-4(b) for UL type TC cables

Features:
- Rated at 90°C wet or dry
- Oil-resistant jacket
- Sunlight- and weather-resistant
- Excellent electrical, thermal and physical properties
- Excellent moisture resistance
- Excellent flame resistance
- "Heavy duty" rating per ICEA standards
- Excellent low temperature cold bend characteristics
- Meets cold bend test at -35°C

Compliances:
- UL Type RFH-2, FFH-2, VW-1 conductors
- UL Type TC - 600V
- ICEA S-73-532
- ICEA S-82-552-600V
- IEEE 1202 (70,000 BTU/hr)/CSA FT4
- ICEA T-29-520 (210,000 BTU/hr)
- IEEE 383 (70,000 BTU/hr)
- UL Subject 1277 (70,000 BTU/hr)
- Meets EPA 40 CFR, Part 261 for leachable lead content per TCLP method
- OSHA acceptable

Packaging:
- Material cut to length and shipped out on non-returnable wood reels

BICC BRAND | UL LISTED

General Cable

Phone: (800) 338-0901
www.generalcable.com

ANIXTER

QUOTATION

See attached Anixter Terms and Conditions of Sale

Date: 02/18/2003
Quote #: 21079
Customer #: 821144

KEN NIELSON
INTERMOUNTAIN POWER SERVICE CO
850 W BRUSH WELLMAN RD

DELTA, UT 84624
Phone:
Fax: 438-864-0737

Anixter Inc.
Corporate Headquarters
4711 Golf Road
Skokie, IL 60076

Item	Quantity	Anixter Catalog Number and Description	Unit	Unit Price	Extended Price
01	5000	2RH-1604SPOS 16-4P TYPE TC TNC XLP VW-1 IND+O/A FOIL SHD HYP JKT 90C 600V BLK/WHT/#S	MF	1360.00	$6,800.00
02	5000	2RH-1601POS 16-1P TYPE TC TNC XLP VW-1 O/A FOIL SHD HYP JKT 90C 600V BLK/WHT/#S	MF	460.00	$2,300.00
03	5000	2RH-1203 12-3C XLP/HYP STR TNC XLP HYP JKT 600V VW-1 TYPE TC K2	MF	560.00	$2,800.00
04	1000	2RH-1601TOS 16-1T TYPE TC TNC XLP VW-1 O/A FOIL SHD HYP JKT 90C 600V BLK/WHT/RED/#S	MF	467.00	$467.00
05	1000	2RH-1204 12-4C XLP/HYP STR TNC XLP HYP JKT 600V VW-1 TYPE TC K2	MF	670.00	$670.00
				Page Total:	**$13,037.00**
				Quote Total:	**$13,037.00**

TERMS NET 30, subject to credit approval
F.O.B. SHIP.PT., PPD/CHARGE
SHIPMENT: MATERIAL IN ANIXTER INVENTORY IS SUBJECT TO PRIOR SALE
NOTES: ORDER ACCEPTANCE BASED UPON PRIOR CREDIT APPROVAL
PRICE ON COPPER PRODUCTS BASED ON COPPER @.74LB

Please refer all inquiries to:
MARCIA CORRALES

ANIXTER- W & C -SALT LAKE
1837 S. 4130 WEST BLDG. E
SALT LAKE CITY, UT 84104

Phone: 801-973-0302
Fax: 801-973-4472

COMMENTS: QUOTE IS VALID FOR 30 DAYS FROM ABOVE DAYE
ALL MATERIAL NON-RETURNABLE WITHOUT RETURN AUTHORIZATION

Marcia Corrales

ANIXTER TERMS AND CONDITIONS OF SALE

1. This proposal will become a contract upon receipt by Seller of Buyer's acceptance. Acceptance must be in writing and received by Seller within seven (7) days of the proposal date unless otherwise stated. In all events shipment by Seller and acceptance by Buyer of all or any part of the products covered by this proposal shall constitute acceptance by Buyer of this proposal. Prior to acceptance by Buyer, Seller may withdraw or modify this proposal. This agreement between Seller and Buyer ("the sales contract") with respect to the products (the "products") and/or services (the "services") described in this proposal shall consist of the terms contained herein together with any additions or revisions of such terms mutually agreed to in writing by Seller and Buyer. Seller objects to and shall not be bound by any additional or different terms, whether printed or otherwise, in any document furnished or otherwise proposed by Buyer which attempt to impose any conditions at variance with Seller's terms included herein. Seller's failure to object to provisions contained in any of Buyer's forms shall not be deemed a waiver of the provisions of Seller's terms and conditions which shall constitute the entire, final and exclusive contract between the parties. Prior courses of dealing, and verbal agreements not reduced to a writing signed by Seller, to the extent they modify, add to or detract from the sales contract, shall not be binding on Seller. The sales contract shall be for the benefit of Seller and Buyer and not for the benefit of any other person.

2. The sales contract may not be modified or rescinded except by a writing signed by Seller and Buyer. If all or part of the sales contract is terminated by such modification or rescission, Buyer, in the absence of a contrary written agreement between Seller and Buyer, shall pay termination charges based upon cost determined by accepted accounting principles, plus a reasonable profit on the entire order. Cost shall include any amount Seller must pay to its suppliers due to any termination by Seller of a purchase order for products or services intended for Buyer.

3. Unless otherwise agreed to in writing, Buyer shall pay the purchase price (a) for the products within thirty (30) days from the date of shipment of the products, and (b) for the services within thirty (30) days from the date the services are rendered. Cash discounts do not apply to cases, reels, spools or transportation charges. The purchase price for the products is F.O.B. first point of shipment unless otherwise agreed to in writing. Title to and risk of loss of the products pass to Buyer upon delivery to the carrier. Title to any software purchased shall remain with the licensor and Buyer shall be granted a license for the software according to the license agreement for such software. Buyer agrees to be bound by any license terms pertaining to software sold hereunder. In the event Buyer fails to pay the total purchase price within said thirty (30) day period, Seller shall be entitled to collect an interest charge of the lesser of 1.5% per month or the maximum rate allowed by applicable laws applied to the unpaid purchase price. Seller shall also be entitled, in addition to all other remedies available at law or in equity, to recover reasonable attorneys fees and/or other expenses in collecting the purchase price or otherwise enforcing or successfully defending itself in respect of this sales contract.

4. Any tax or other governmental charge upon the provision of services, or the production, sale, shipment, transfer, consumption, or use of the products which Seller is required to pay or collect from Buyer shall be paid by Buyer to Seller, unless Buyer furnishes Seller with exemption certificates acceptable to taxing authorities. Such amount shall be due whether or not included on the invoice.

5. Shipping date or other applicable performance date is estimated on the basis of immediate receipt by Seller of Buyer's order and all information, drawings and approvals to be furnished by Buyer, and the absence of delays, direct or indirect, resulting from or contributed to by circumstances beyond Seller's reasonable control. Seller will in good faith endeavor to ship products or perform services by the estimated date. Seller shall have the right to make partial shipments. All changes in specifications or estimated shipping or performance date will be by mutual written agreement of Seller and Buyer and where such changes affect Seller's time or cost of performance, an equitable adjustment in estimated shipping/performance date or purchase price, or both, will be made. Prior to shipping, Seller, if requested, will afford Buyer a reasonable opportunity to inspect the products in Seller's plant. If no packaging, loading or bracing requirements are stated, Seller will comply with minimum specifications for the method of transportation specified. If no method of transportation is specified, shipment will be by a reasonable method of transportation.

6. Buyer shall submit all claims for shortages in writing to Seller within thirty (30) days from the date products are received by Buyer; otherwise such claims shall be waived. Unless otherwise agreed to in writing, quantities are subject to normal manufacturer allowances. In the case of wire and cable such allowances are plus 10% and minus 5%. The purchase price for products will equal the unit price multiplied by the quantity shipped. Installation shall be by Buyer, unless otherwise specifically agreed to in writing. Final inspection of products prior to installation thereof will be the obligation of Buyer.

7. Seller passes on and assigns to Buyer the warranties made to Seller by its suppliers, which at a minimum, include a warranty that the products at the time of shipment to Buyer will be free from defects in materials and workmanship, and will be materially in accordance with specifications provided by the manufacturer. Seller's warranty in its entirety shall be deemed limited to and shall not extend beyond such manufacturers' warranties. The length of the warranty period will be the length established by the manufacturer of the product and if no length is specified by the manufacturer, shall in no event extend beyond one (1) year from the date of shipment. Buyer shall proceed exclusively and directly against such supplier at Seller's request. This warranty does not cover wear and tear and shall be ineffective and shall not apply to products that have been subjected to misuse or abuse, neglect, accident, damage, improper installation, or maintenance. Buyer will inspect the products upon delivery and will promptly notify Seller in writing of any defect in the products. Seller's sole obligation under these warranties will be limited to either, at Seller's option and expense, repairing or furnishing a replacement for the products or parts thereof which Seller reasonably determines do not conform with these warranties, and Buyer's exclusive remedy for breach of any such warranties will be enforcement of such obligation of Seller. All transportation costs of and in-transit risk of loss and damage to products or parts thereof returned for warranty repair, and to such repaired or replacement products or parts thereof returned to Buyer, will be borne by Buyer. No agent, employee or representative of Seller has any authority to bind Seller to any representation, affirmation or warranty concerning the products and any such representation, affirmation or warranty shall not be deemed to have become part of the basis of this sales contract and shall be unenforceable. Seller will perform the services in accordance with Seller's customary procedures. Seller makes no warranty that software will operate uninterrupted or error free. THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF, AND BUYER WAIVES ALL OTHER WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND OF ANY OTHER TYPE, WHETHER EXPRESS OR IMPLIED, ARISING BY LAW (STATUTORY OR OTHERWISE) AND WHETHER OR NOT OCCASIONED BY SELLER'S NEGLIGENCE.

8. IN NO EVENT SHALL SELLER OR ITS SUPPLIERS BE LIABLE FOR SPECIAL, INCIDENTAL, INDIRECT, PUNITIVE, OR CONSEQUENTIAL DAMAGES, HOWEVER ARISING, INCLUDING SUCH DAMAGES OCCASIONED BY SELLER'S NEGLIGENCE, nor shall Seller's liability on any claims for damages arising out of or connected with the sales contract or the manufacture, sale, delivery or use of the products exceed the purchase price of the products and/or services. Seller shall not be liable for any failure to perform its obligations under the sales contract resulting directly or indirectly from or contributed to acts of God, acts of Buyer, civil or military authority, fires, strikes or other labor disputes, accidents, floods, war, riot, inability to secure material or transportation facilities, acts or omissions of carriers, or any other circumstances beyond Seller's reasonable control. Seller shall have no liability under this sales contract than otherwise expressly provided in this sales contract.

9. Seller will hold Buyer harmless against any rightful claim of any third person by way of infringement of any United States Letters Patent by products which are of Seller's own manufacture, but if Buyer furnishes specifications to Seller, Buyer will hold Seller harmless against any such claim which arises out of compliance with the specifications; provided that the party seeking to be held harmless notifies the other party and gives it the right to defend. Except as is provided in this paragraph, Seller makes no warranty that the products will be delivered free of the rightful claim of any third party by way of infringement of any intellectual property rights or the like. Seller's obligation under this paragraph shall not apply to any infringement consisting of the use of products as part of goods manufactured by Buyer or others.

10. This proposal and sales contract shall be governed by the Uniform Commercial Code as adopted in the State of Seller's principal place of business as effective and in force on the contract date. Wherever a term defined by said Uniform Commercial Code is used in these terms and conditions, the definition contained in the Uniform Commercial Code is to control. Any action for breach of the sales contract or any covenant or warranty must be commenced within one (1) year after the cause of action accrues.

BABCOCK BORSIG POWER
DB RILEY

PHONE: (508)
FAX: (508)

FACSIMILE TRANSMITTAL SHEET

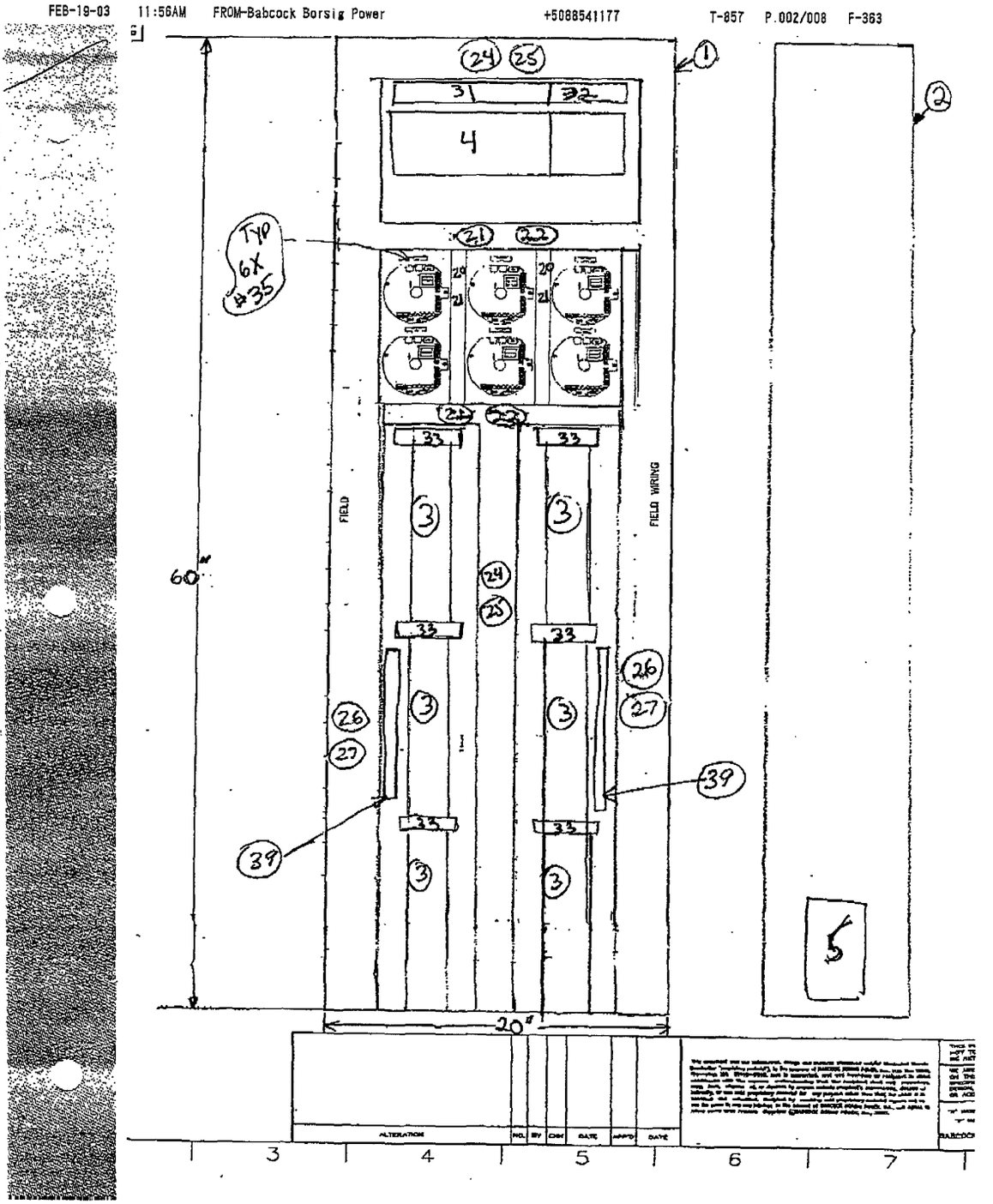
TO: KEN NIELSON	DATE: FEB. 19, 2003
COMPANY: INTERMOUNTAIN	FROM: FRANCISCI PALACIOS
FAX NUMBER: (435) 864 0737	TOTAL NO. OF PAGES INCLUDING COVER: 8
RE: JORDAN AMPLIFIER BOX	

x URGENT ☐ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY

NOTES/COMMENTS:

We may need to use one panel side or move to a 31" W x 24"D box.

PO BOX 15040, WORCESTER, MA 01615-0040


FEB-19-03 11:56AM FROM-Babcock Borsig Power +5088541177 T-857 P.002/008 F-363
Typ 6X #35
FIELD
FIELD WIRING
60"
20"
4
5
ALTERATION
3
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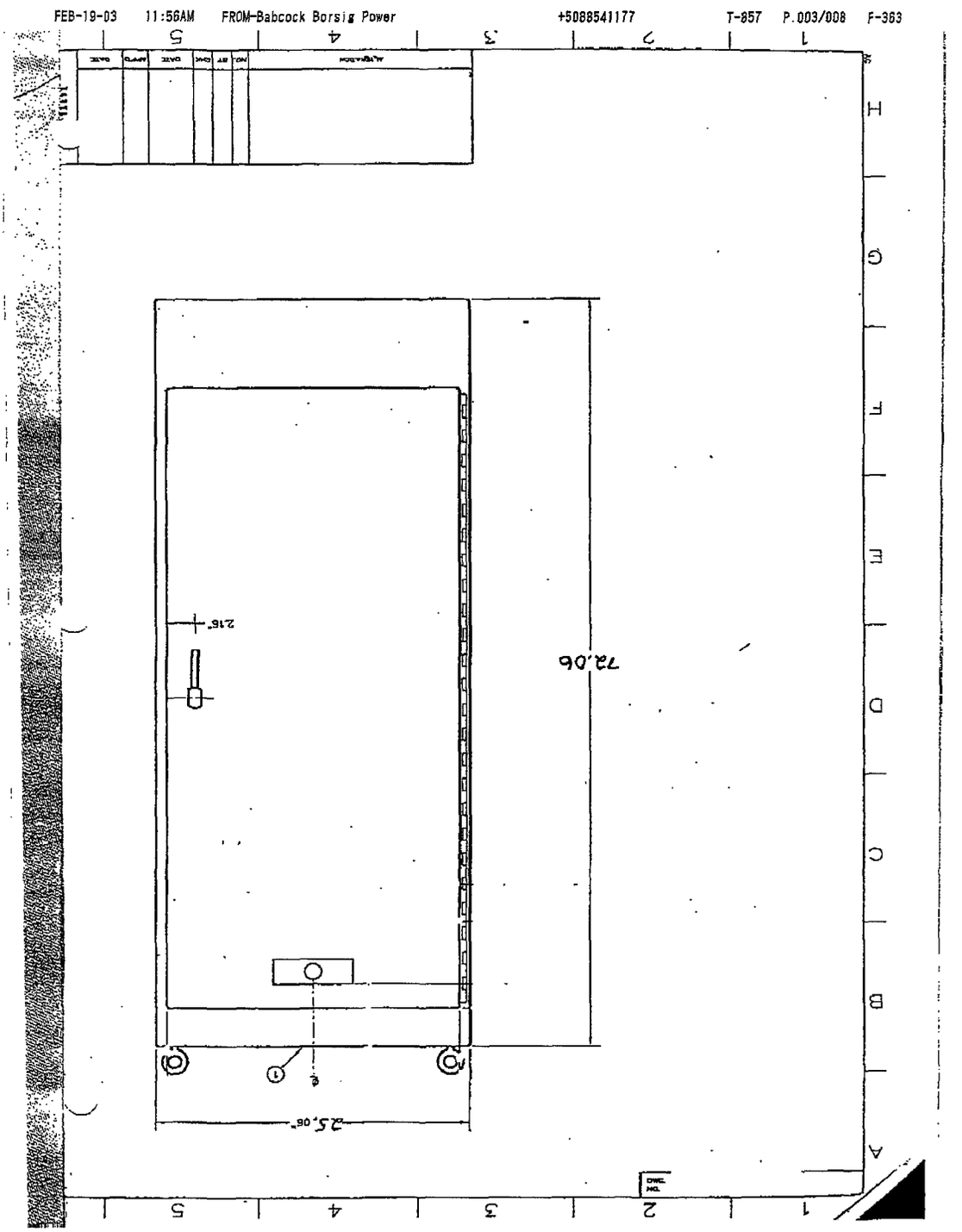
7


FEB-19-03 11:56AM FROM-Babcock Borsig Power +5088541177 T-857 P.003/008 F-363
73.06
25.08"
216"

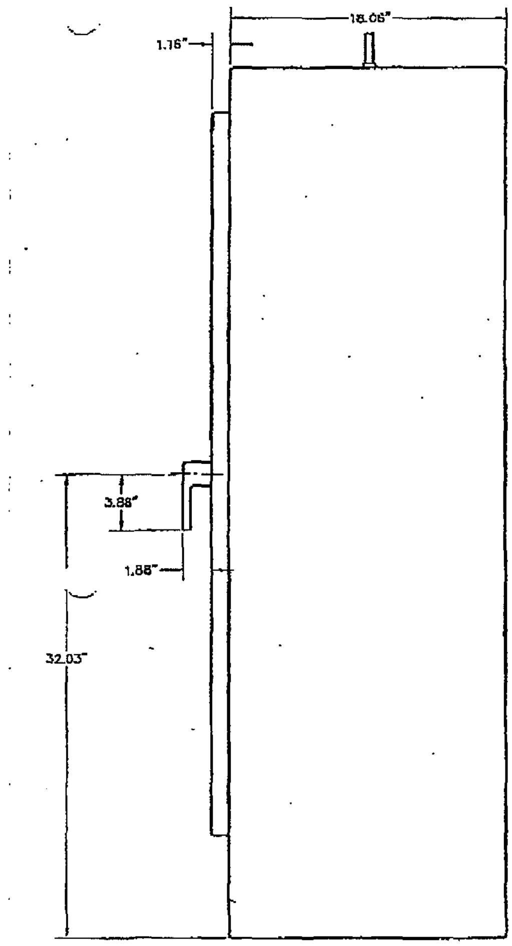
IP7_039946

FEB-19-03 11:56AM FROM-Babcock Borsig Power +5088541177 T-857 P.004/008 F-363

ITEM	QTY	MANUFACTURER	MODEL NO.	DESCRIPTION
1	1	HOFFMAN		ENCLOSURE NEMA 4 72H X 25W X 18D
2	1	CUSTOM	LP-1	LEGEND PLATE 2" X 6" WHITE WITH BLACK LETTERS

A-72H2518FS
A-72H3124FS

or
Saginaw
SCE72EL3024
72" x 31" x 24"



FOR GENERAL INFORMATION ONLY

BABCOCK BORSIG POWER, I

ENCLOSURE OUTLINE

FUNCTIONAL REVIEW / APPROVAL

BABCOCK BORSIG POWER, Inc.

DO NOT SCALE

SCALE NONE

DWG. NO. 100210-949060 I

6 7 8 9 10 11 12

There will also Be Power Distribution Wiring To the Seven Fuses

NOTES: REF: ALL NOTES ARE VIEWED FACING OUTPUT SHAFT.

WARNING! BEFORE APPLYING INPUT POWER, CHECK FOR PROPER SELECTION OF SLIDE SWITCH. OPERATING VOLTAGE CHANGES CANNOT BE MADE SIMPLY BY CHANGING THE POSITION OF THE AMPLIFIER VOLTAGE SWITCH. MOTOR AND CAPACITOR MUST BE CHANGED AS WELL. REFER TO ACTUATOR NAME PLATE FOR PROPER VOLTAGE.

MAINTAIN A MAXIMUM OF 50 FT. OF WIRING LENGTH BETWEEN THE AMPLIFIER AND ACTUATOR.

1) INPUT POWER: FOR 120VAC MOTOR MOVE SLIDE SWITCH TO THE 120VAC POSITION. (SEE WARNING)
~~FOR 240VAC MOTOR MOVE SLIDE SWITCH TO THE 240VAC POSITION. (SEE WARNING)~~
FOR INPUT POWER REFER TO ACTUATOR NAMEPLATE.

2) COMMAND INPUT: CURRENT COMMAND:

FOR 4 to 20mA COMMAND INPUT SIGNAL, SELECT DIP SWITCH ONE (1) AND TWO (2) IN THE ON POSITION. SELECT DIP SWITCH SEVEN (7) IN THE OFF POSITION.

VOLTAGE COMMAND:

FOR 0–10 VDC COMMAND SIGNAL INPUT, SELECT DIP SWITCH ONE (1) IN THE OFF POSITION AND SELECT DIP SWITCH TWO (2) IN THE ON POSITION.

FOR 0–5 VDC COMMAND SIGNAL INPUT, SELECT DIP SWITCH TWO (2) IN THE OFF POSITION AND SELECT DIP SWITCH ONE (1) IN THE ON POSITION.

3) SHIELDING: SHIELDED CABLE IS REQUIRED FOR ALL COMMAND AND FEEDBACK SIGNAL WIRING.

4) CALIBRATION:

AN INCREASING COMMAND SIGNAL WILL RESULT IN "CCW" ROTATION OF THE OUTPUT SHAFT. SET COMMAND SIGNAL TO A MINIMUM (4mA). ADJUST THE "LO" TRIM POT ON THE AD–8230 AMPLIFIER SO THAT THE AMPLIFIER NULLS JUST BEFORE THE "CW" POSITION LIMIT "TRIPS". SET COMMAND SIGNAL TO MAXIMUM (20mA). ADJUST THE "HI" TRIM POT ON THE AD–8230 AMPLIFIER SO THAT THE AMPLIFIER NULLS JUST BEFORE THE "CCW" POSITION LIMIT "TRIPS". IT MAY BE NECESSARY TO REPEAT THESE STEPS UNTIL PROPER ACCURACY IS ACHIEVED.

FOR AN INCREASING COMMAND RESULTING IN "CW" ROTATING OF THE OUTPUT SHAFT, INTERCHANGE WIRES AT CONNECTOR TERMINALS TB1–4 & TB1–5 AND TB2–5 & TB2–6. IT MAY BE NECESSARY TO ADJUST THE "LO" AND "HI" TRIM POTS ON THE AD–8230 AMPLIFIER FOR CALIBRATION.

5) TRANSMITTER: INPUT POWER TO TERMINAL 15 POSITIVE (+) AND 16 NEGATIVE (–) REQUIRES AN EXTERNAL REGULATED POWER SUPPLY IN THE RANGE OF 12.0 (MIN.) TO 36VDC (MAX.) AND A LOAD (CUSTOMER SUPPLIED) CONNECTED IN SERIES WITH THE POWER SUPPLY AS SHOWN. TRANSMITTER SIGNAL WILL FOLLOW THE COMMAND SIGNAL. (EX: INC COMMAND = INC FEEDBACK)

$$\frac{\text{POWER SUPPLY VOLTAGE} - 8\text{VDC}}{0.020\text{A MAX.}} = \text{LOAD RESISTANCE}$$

$$(0.020\text{A})^2 \times \text{LOAD RESISTANCE} = \text{MINIMUM WATT RATING OF RESISTOR}$$

6) POSITION LIMITS:

ALL POSITION LIMIT SWITCHES ARE SHOWN WITH THE ACTUATOR OUTPUT SHAFT AT THE MID–TRAVEL POSITION. NOT OPERATED.
MAXIMUM CIRCUIT RATINGS: 2000 VA, 300 V MAXIMUM, 20 A MAXIMUM. 1 HP AT 125 V ac, 2 HP AT 250 V ac

LS1: FACTORY SET TO OPERATE (OPEN CIRCUIT) AT "CW" END OF ACTUATOR OUTPUT SHAFT ROTATION.
LS2: FACTORY SET TO TRIP (OPEN CIRCUIT) AT THE "CCW" END OF OF ACTUATOR OUTPUT SHAFT ROTATION.

THIS PRINT CERTIFIED TO BE CORRECT
CUSTOMER: BABCOCK BORSIG POWER
P.O.# 433413 BY: KF
JORDAN#: 70366–4 DATE: 2/7/03

For: Intermountain Power
BPI Dwg # 100210-2-4931-110-00

REFER TO INSTRUCTION MANUAL FOR FURTHER SET–UP INSTRUCTIONS.

		TOLERANCES UNLESS OTHERWISE SPECIFIED .XX ±.01 .XXX ±.005 ANGULAR ± 1°			DO NOT SCALE	TITLE– INTERCONNECT DIAGRAM AD–8230 CONTROL ENCL		
		SCALE– NONE			Jordon Controls Inc. MILWAUKEE, WISCONSIN, USA	FOR– SM–5100/SM–5200		
INITIAL RELEASE	KF 2/4/03	KF		B.Z.				
DESCRIPTION	DATE	DATE– 2/4/03	DATE–	DATE– 2/4/03	[illegible]	95	C	042094–02

FEB-19-03 11:57AM FROM-Babcock Borsig Power +5088541177 T-857 P.007/008 F-363

ITEM	QTY	MANUFACTURER	MODEL NO.	DESCRIPTION
1	1	HOFFMAN	A72P24FI	INSERT PANEL 60" X 20"
2	1	" "	A-72SMP14	SIDE MOUNT PANEL 60" X 14"
3	6	STATES	HM25016	16PT SLIDE LINK with Hinged Cover with white marker STRIP.
4	1	" "	HM25010	10PT " " "
5	1	Hoffman	D-AH8001B	800watt 120V Heater
11				
12	2	ALLEN BRADLEY	1492-N23	END ANCHOR
13				
14				
15	8	ALLEN BRADLEY	1492-WFB10	FUSE HOLDER
16	1	ALLEN BRADLEY	1492-SJ17-58	FUSE HOLDER SIDE JUMPER
17				
18				
19				
20	A/R	PANDUIT	NE1X4WH6	NON-PVC WIREWAY 1" WIDE X 4" HIGH
21	A/R	PANDUIT	NC1WH6	NON-PVC WIREWAY COVER 1" WIDE
22	A/R	PANDUIT	NE1.5X4WH6	NON-PVC WIREWAY 1.5 " WIDE X 4" HIGH
23	A/R	PANDUIT	NC1.5WH6	NON-PVC WIREWAY COVER 1.5" WIDE
24	A/R	PANDUIT	NE2X4WH6	NON-PVC WIREWAY 2" WIDE X 4" HIGH
25	A/R	PANDUIT	NC2WH6	NON-PVC WIREWAY COVER 2" WIDE
26	A/R	PANDUIT	NE3X4WH6	NON-PVC WIREWAY 3" WIDE X 4" HIGH
27	A/R	PANDUIT	NC3WH6	NON-PVC WIREWAY COVER 3" WIDE
28	1	BUSS	FNQ-20	20 AMP TIME DELAY FUSE
29	6	BUSS	FNM-10	10 AMP TIME DELAY FUSE
30	1	" "	FNM-5	5 " " " "
31	1	CUSTOM	LP-1	LEGEND PLATE 1" X 10" BLK w/WT Letters ENGRAVING CENTERED "TBA"
32	1	CUSTOM	LP-2	LEGEND PLATE 1" X 4" BLACK WITH WHITE LETTERS ENGRAVING CENTERED OVER EACH DEVICE TBA
33	6	CUSTOM	LP-3	LEGEND PLATE 1" X 3" BLACK WITH WHITE LETTERS ENGRAVING ALL Engraving will be Different
35	6	CUSTOM	LP-5	LEGEND PLATE 1"X2" BLACK WITH WHITE LETTERS ENGRAVING ALL DIFFerent.
39	2	SQUARE D	PK23GTA-L	GROUND BAR

FOR GENERAL INFORMATION ONLY

BABCOCK BORSIG POWER, Inc.

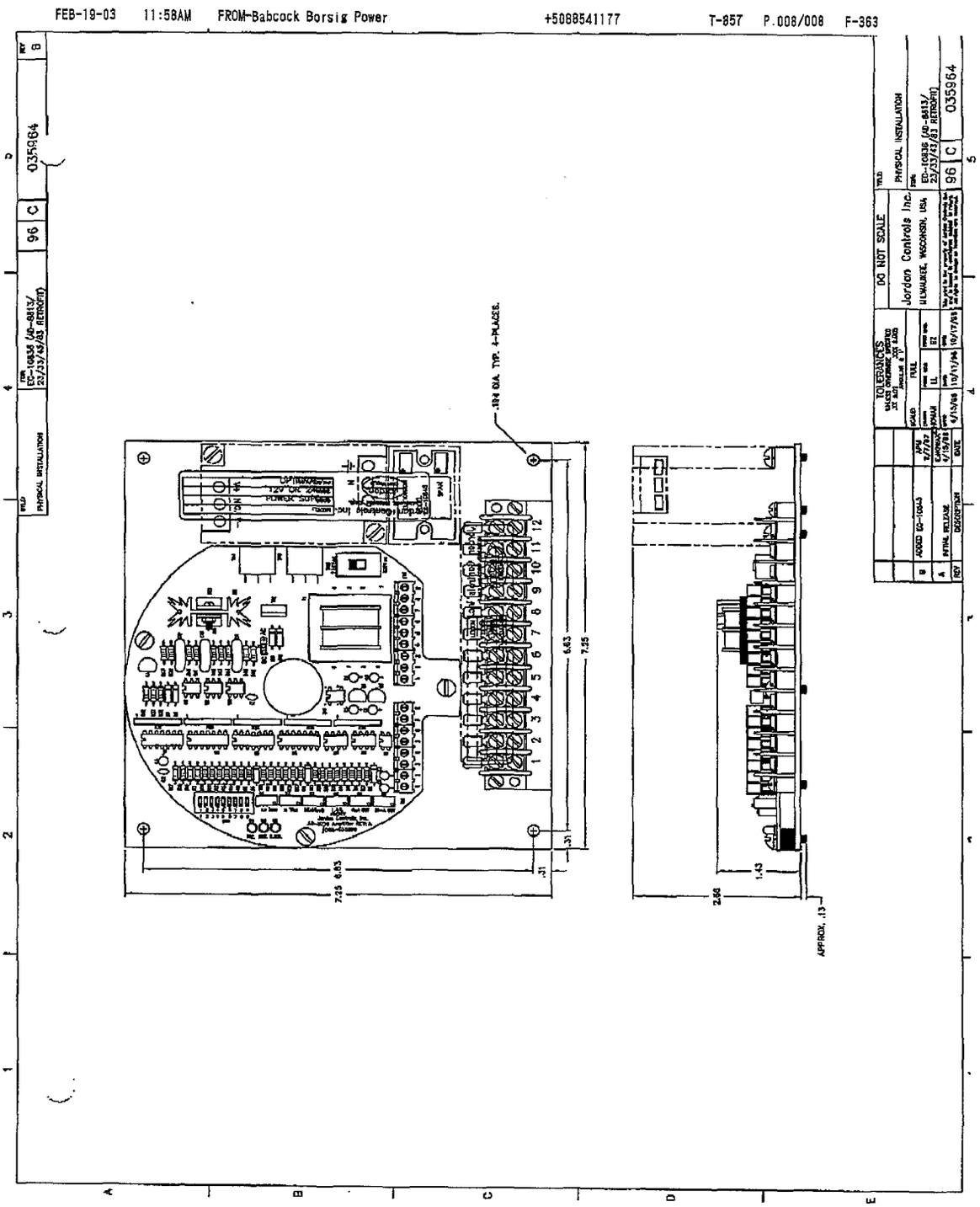
INSERT PANEL LAYOUT

DO NOT SCALE USE DIMENSIONS ONLY

SCALE NONE

DWG NO. 1001 -94906 2-

8 9 10 11 12


FEB-19-03 11:58AM FROM-Babcock Borsig Power +5088541177 T-857 P.008/008 F-363
035984
DO NOT SCALE
Jordan Controls Inc.
MILWAUKEE, WISCONSIN, USA
PHYSICAL INSTALLATION
035984
.194 DIA. TYP. 4 PLACES
6.83
7.25
.31
2.56
1.43
APPROX. .13

1050 Hopper Avenue • Santa Rosa, CA 95403

AIR MONITOR CORPORATION

Corporate Offices
P.O. Box 6358
Santa Rosa, CA 95406
Tel: (707) 544-2706
Fax: (707) 526-2825

Attn: Ken Nielson
Intermountain Power

March 4, 2003

Ref: Traverse proposal for Intermountain Power

Dear Ken,

Air Monitor appreciates the opportunity to provide a proposal to do a traverse on air ducts at the Intermountain Power

Objective: The purpose of the test program is to verify total OFA volumetric flow.

Scope: The testing will consist of 3-D traverse measurements of four OFA ducts. Initially the tests will only be taken at one load. This price quote includes an addendum to expand the testing to include traverse tests on all four OFA ducts at three loads.

Methodology: AMC proposes to perform the test in accordance with Title 40 of the Code of Federal Regulations, Part 60, (40 CFR 60) Appendix A.

Personnel: AMC shall provide one (1) Test Technician to complete the proposed testing. It is requested that the site provide one (1) assistant to help in the testing. If an assistant cannot be supplied then Air Monitor will provide addition personnel at an additional charge.

Data Reporting: Initial test data will be available to the customer at the time of testing. A full report with compiled data and analysis will be delivered shortly after testing is completed.

Proposed Price: I have broken this quote down on a time and materials basis. Please note that our services are provided in full day (8 hour) increments only.

Mobilization charges to bring personnel and equipment on-site:

Travel Expenses (airfare, mileage, car rental, etc.,est.)	$1,500
Freight for test equipment – round trip , est.	$ 300
Travel labor – round trip, est.	$ 250
Total mobilization charge:	$2,050

Note: The travel and freight expense will be charged at actual cost, and will not exceed the estimate by more than 10%.

Testing Charges:

Labor (estimated 2 days on-site)	$ 1,600
Charges for each additional on-site day:	$ 800

This proposed price is based upon site supplying a full time assistant to assist Air Monitor's testing technician. In the event, the site cannot provide assistance Air Monitor will supply an additional technician at an additional labor charge.

Total estimated charges (single load testing: $3,650

AMC Responsibilities:
As part of this proposal AMC will provide:

1. Necessary field testing instrumentation including calibration and maintenance.
2. Necessary laboratory instrumentation including preparation, calibration, and maintenance.
3. All testing in the field.
4. Preliminary data reduction and analysis on site.
5. Complete documentation of all testing.

Conditions of Sales:
The proposed price is based on the following conditions.

1. Prices based on services being performed during a normal work week during normal business hours. No overtime, weekend or holiday rates have been included.
2. AMC will schedule the testing to begin at the client's specified target date. AMC requires two (2) weeks notice once the work has been approved to insure manpower will be available to perform this work.
3. This price is valid for 12 months from the date of this proposal.
4. Project delays while at site, caused by circumstances not within the control of AMC will be charged at the daily rates outlined in this proposal.

Client Responsibilities:
This proposal is based upon the client fulfilling the following requirements:

1. Safe sampling locations and access to them, including scaffolding, man lifts, etc. if needed.
2. A detailed description of all sample ports including sizes (1" pipe, 2" pipe, etc), location and the depth of the port.
3. Clean sample ports with covers finger tight.

- Quote addendum for multiple load tests –

Mobilization charges to bring personnel and equipment on-site:

Travel Expenses (airfare, mileage, car rental, etc.,est.)	$ 1,500
Freight for test equipment – round trip , est.	$ 300
Travel labor – round trip, est.	$ 250
Total mobilization charge:	$2,050

Note: The travel and freight expense will be charged at actual cost, and will not exceed the estimate by more than 10%.

Testing Charges:

Labor (estimated 4 days on-site)	$ 3,200
Charges for each additional on-site day:	$ 800

This proposed price is based upon site supplying a full time assistant to assist Air Monitor's testing technician. In the event, the site cannot provide assistance Air Monitor will supply an additional technician at an additional labor charge.

Total estimated charges (multiple load testing): $5,250

The above quote is an estimate and takes into account set-up time and moving of equipment. Firm figures cannot be determined until the work is actually in progress and the entire scope of the project is understood.

If you have any questions or require additional information please contact our office.

Sincerely,

Robert J. Boynton
Service Manager

From: Ken Nielson
To: fpalacios@babcockpower.com
Date: 1/21/2004 9:40 AM
Subject: E-mail test from Intermountain Power
Attachments: OFA duct Traverse Port spacing.pdf

Francisco,
The re-send of the scanned files failed. It may be too large. So, I am sending the files in three separate e-mails in a compressed format. Please reply if you get this so I know it was received.

Note: I have included the text from the original e-mail below. I will update the other the sketch on the tubing before I send it.

As a reference, I am sending the three *.TIF files that are scanned images of the field sketches of some of the things we discussed this morning.

One file shows the layout or spacing of the ports needed in for the OFA duct. The dimensions are based on the Unit 1 duct height at the location of installation. As we discussed, a big concern is access interference to the ports with traverse probes. 2" diameter, schedule 40 pipe, approximately 12" in length with course threaded caps were used for the port nipples.

One file shows a rough sketch of the dimensions of the tubing route from the feeder duct volu-probe to CAMS panel. One thing that is not shown here is the flex-connection lengths. There will be upwards of 12" of movement of anything secured to the duct from its cold position; hence, the flex-tubing pieces need to be long enough to accommodate this movement without stressing the rigid tubing sections. The position/location of the U2 CAMS panels are expected to be approximately the same as U1; but, there are some minor differences due to piping and other minor obstructions at each location. That may cause some differences in the field fab. tubing lengths from what is shown on this sketch for U1. On the structural drawings on the 9th level, there are vertical structural columns located about 20' out from the boiler corners at 45 deg. through the corner. The CAMS panels will be located on or to the immediate side of these columns as was done on U1.

The other file is a sketch of access ports field fabricated to allow access to the OFA port volu-probes. The dimensions show 10" x 10". These hatches should be large enough to accommodate removal of the volu-probes and tool access for personnel doing the work if they must be removed for maintenance later. These hatches must be located immediately above and centered over the port volu-probes. They must be bolt down with a high-temp gasket seal (+750 deg). Also, they will need to have removable insulation caps placed over the hatches during normal operation.

Please review these and ensure that TEI drawings and materials lists include these items.

Please call on this or any other items on which you have questions.

Thanks,
Ken

Kenneth M. Nielson, P.E.
Lead Engineer, Technical Services
Intermountain Power
Delta, UT 84624
Phone: (435) 864-6437
Fax: (435)864-0737
kenneth-n@ipsc.com

From: Phil Hailes
To: csimmons@bbpwr.com; esmallhorn@bbpwr.com; James Nelson; lboucher@bbpw...
CC: Ken Nielson
Date: 6/24/2003 2:37 PM
Subject: Failed OFA Bearing Photos
Attachments: P6230028.JPG; P4300011.JPG; P6230013.JPG; P6230014.JPG; P6230015.JPG; P6230016.JPG; P6230017.JPG; P6230018.JPG; P6230019.JPG; P6230020.JPG; P6230021.JPG; P6230022.JPG; P6230023.JPG; P6230024.JPG; P6230025.JPG; P6230026.JPG; P6230027.JPG; P4300002.JPG; P6230029.JPG; P6230030.JPG; P6230031.JPG; P6230032.JPG; P6230033.JPG

Please find the attached photos of the failed OFA bearings which Ernest Smallhorn has discussed with you.

Every (yes, Every) bearing looks like the ones in these photos.